

Deadline 7 - Response to – Deadline 5 – 8.36 Comments on any further information received at Deadline 4

Matters Raised

18.1.1

The storing of topsoil and planting wildflowers or quick growing crops on top does not necessarily provide any screening for birds that will be coming into the area. Removing the top soil is creating nesting habitat. How in advance of construction, will the topsoil be removed, as timing is critical? Clearing as the Stone curlews are coming back is providing habitat. But the planted topsoil screening is somewhere else in the landscape.

The Applicants Response

See response to item 40.3.47 in the Comments on Written Representations [REP3-013]. Furthermore, as detailed within MW-BIO8 of the OEMP [REP4- 020], it may be useful to maintain a crop in certain locations or install bird deterrents to deter stone curlew from nesting; this will be site specific.

M & R Hosier response to 8.36

Item referenced: 40.3.48

40.3.48 *Appropriate management measures would depend on the condition of the soil. The contractor is responsible for the protection of geology and soil resources during construction, including in relation to the removal, handling, and storage, as well as reinstatement, will be delivered through measures contained in the Outline Environmental Management Plan (OEMP) [APP- 187] (a revised version of which is submitted at Deadline 3). The primary mechanism for this protection will be the Soils Management Strategy (SMS) (MW-GEO3), which will identify the nature and types of soil that will be affected and the methods that will be employed for stripping and storing soil (with topsoil and subsoil being stored separately (where present)) and the restoration of agricultural land. Compliance with the OEMP is secured through paragraph 4 of schedule 2 of the draft development consent order [REP2-003]. Stone curlew deterrent measures will be included in the CEMP (PW-BIO5 and MW-BIO8) as specified within the Outline Environmental Management Plan (OEMP) [APP-187].*

M & R Hosier response to 8.36

40.3.47 refers to soil and protection to soil, with a short sentence directing to PW-BIO5 and MW-BIO8. We believe both responses to be lacking in the necessary detail to provide adequate deterrents to nesting Stone Curlews within the boundaries of the Scheme. We continue to raise this point yet PW-BIO5 and MW-BIO8 remain unchanged.

We have previously asked what these bird deterrent measures may be, but have had no answers.

In areas where work is not expected to commence immediately, we would expect the Scheme to retain ground cover between the months of March to July to minimise the risks of a Stone curlew breeding attempt.

18.1.2

Having worked for the RSPB for 14 years and having direct experience of nesting stone-curlew, monitoring and management and provision of habitat. Removing the topsoil and creating bare ground, is what's proposed for Parsonage Down curlew plot mitigation. Bare ground will have a high level of attraction for stone-curlews coming into the area. Also, it seems quite unworkable that it can be a 10-week period from nest creation to birds fledging; chicks fledging and leaving. I would suggest the whole process is quite unworkable depending on which time of year the construction is planned. The autumn roosts which are integral to their full entire breeding cycle have been overlooked; with young and adults gathering. The bare areas would likely attract them. Is the applicant aware of a potential 10-week period that they would have to exclude themselves from any breeding nests?

The Applicants response

Items PW-BIO5 and MW-BIO8 of the OEMP summarise deterrent measures that may be used within the Scheme boundaries [REP4-020]. The type of deterrent measure to be employed will be dependent on the working locations/areas. As stated in the OEMP, deterrent measures that could be employed include planting bare ground with quick crop or wildflower/game cover seed. It is correct that the replacement stone curlew plot at Parsonage Down is proposed to be created as bare ground.

As stated within 9.7.17 of the Comments received to Deadline 3 [REP4-036], a nest is considered active (and thus protected) until the chicks are no longer dependent on the nest (please refer to PW-BIO4 of the OEMP [REP4-020]).

The Applicant is fully aware of the time constraints associated with nesting stone curlew, these have been considered during the production of the OEMP [REP4-020].

With regards to stone curlew autumn roosts please refer to item 9.5.1 of the Comments received to Deadline 3 [REP4-036], which summarises the measures to avoid sensitive ecological receptors. These measures are

considered suitable and proportionate to avoid disturbing the autumn roost of stone curlews

M & R Hosier 8.36 response

The Applicant continues to show a lack of understanding for the Stone curlew species and their behaviour.

Firstly refer to our comments in item 18.1.1 above, the Applicant's mitigation to prevent Stone curlews from nesting within the Scheme area is exactly the same as the measures intended for "creating" the new Stone curlew mitigation plot at Parsonage Down. As such, this is inadequate.

Item 9.7.17 of the Comments received to Deadline 3 [REP4-036], is in breach of Habitats Regulations. It is not only the nest that is in need of protection. The chicks are dependent upon their parents for food for up to 10 weeks. During this time, they are vulnerable to being run over by construction traffic. See our comments in response to Comments received to Deadline 3 [REP4-036].

There are no references within the OEMP in respect of the autumn Stone curlew roost, so we do not agree that the Applicant has taken suitable and proportionate measures.

18.1.3

Not everybody has experience with stone-curlew as was demonstrated at the archaeological surveys that took place near the Western portal last summer, when a number of times RSPB were called in to help locate the birds. I think this underlines the importance that the contractors chosen have the necessary experience, because this breeding species is not easy even for the experienced people to detect. It is imperative that there is this level of experience within the ecology of works department.

The Applicants Response

See response to items 9.7.17-18 in the Comments received to Deadline 3 [REP4-036]. Appropriate specialists with experience of stone curlew have been used where necessary during the archaeological and ground investigation works in 2018. As stated in PW-BIO5 and MW-BIO8 of the OEMP [REP4-020], compliance with which is secured by the dDCO, an appropriate specialist will undertake the stone curlew monitoring

M & R Hosier response to 8.36

We dispute the fact that the Applicant has used specialists with Stone Curlew experience; if this had been the case, they would have been able to detect the Stone curlews they were already monitoring on the archaeological site without the need to call in the RSPB Stone curlew team. As such, we have no confidence that the Applicant has taken on board the Annex 1 status of the bird, giving no reassurance as to the protection of the birds during the 6 years of construction of the Scheme.

We stand by all our comments within our reply to Comments received to Deadline 3 [REP4-036].

18.1.4

I would suggest that the still highly unknown impact of the increase in recreational pressure around Normanton Down reserve and the south area of the World heritage Site will have unknown impacts upon both stone-curlew and great bustard, and there are quite a lot of I would suggest 'unqualified' statements in the applicants documents suggesting that there will be no effect to great bustard"

The Applicants Response

As summarised within the oral submission for ISH7 regarding biodiversity and ecology [REP4-035] and in item 30.1.9 of Comments received to Deadline 3 [REP4-036], the Applicant stands behind the contents of the SIAA with regards to stone curlew. However, the Applicant has reviewed the

contents of RSPB's and Natural England's submissions into the examination in respect of stone curlew and has welcomed the on-going discussions with both parties.

As a result of these discussions, the Applicant is willing to commit to procure and provide two additional new stone curlew breeding plots. These would be in addition to the previously proposed new stone curlew breeding plots at Parsonage Down and Winterbourne Down (as reported in the Statement to Inform Appropriate Assessment [APP-267]). This means the Applicant will be providing a total of four new stone curlew breeding plots, forming an overall package of mitigation and enhancement in respect of stone curlew breeding opportunities in the vicinity of the proposed scheme.

More details on the two additional new stone curlew breeding plots will be provided in submissions at Deadline 6.

As stated within 9.7.21 of Comments received to Deadline 3 [REP4-036], further engagement with the Great Bustard Group will be undertaken during the construction period.

Also as stated within 9.7.21 of Comments received to Deadline 3 [REP4-036], it is unlikely that great bustards would start to nest close to the PRow's at Normanton Down. As the local population has only started to colonise beyond Salisbury Plain in recent years, there are extensive areas of farmland into which the population could expand, within a few kilometres of the Scheme and in the wider Wessex area. The potential increase in recreational disturbance on the PRow's at Normanton Down is therefore unlikely to have a detrimental impact on the population of great bustards.

M & R Hosier response to 8.36

Comments received to Deadline 3 [REP4-036] item 30.1.9. We are unable to locate this reference as the report only goes up to item 27.1.9!

The Applicant states that they stand behind the contents of the SIAA, yet the Scheme as presented would fail to meet Habitats Regulations as it fails to ***“dispel all reasonable scientific doubt concerning the effects of the work envisaged on the site concerned as well as the unknown impact of recreational pressures once the Scheme is in operation”***

Therefore, in order to avoid triggering Habitats Regulations, the Applicant HAS TO provide the additional two Stone curlew plots to mitigate any potential negative effects due to potential recreational pressures upon the two Normanton Down Stone Curlew breeding plots. Parsonage Down, being in the path of the proposed Scheme, had to be mitigated. Winterbourne Downs plot was a net gain in respect of the biodiversity legacy of the Scheme (as stated within Chapter 8 Biodiversity [APP-046]), and would therefore not be counted as mitigation for Normanton Down plots. This is also noted within RSPB Written Representation [REP3-013]

Mitigation for the two Normanton Down plots would need to follow the same criteria used to locate the new Parsonage Down plot, ie to be in as close a proximity as possible, for the displaced breeding pair to use. This is reference Chapter 8 Biodiversity [APP-046] paragraph 8.9.28

8.9.28

“As part of the embedded mitigation of the Scheme a new 1.2ha stone curlew breeding plot would be created within Parsonage Down SSSI and NNR. The new breeding plot would be created, under agreement with Natural England, approximately 500m from the stone curlew breeding plot to be lost, in what is very likely to be the foraging area for the breeding pair on the plot to be lost; as such, it is very likely to be easily discoverable by the birds that breed on the plot to be lost”

Similarly, The Statement to Inform Appropriate Assessment paragraph 5.1.7 refers to:

5.1.7

“There is a high degree of confidence that this stone curlew plot will be utilised as it is to be provided in a suitable area on suitable soil close to an existing plot that has been regularly used by stone curlew, and the plot is being designed and delivered in conjunction with RSPB and Natural England in a manner that has been successful with the other plots around the Salisbury Plain area.” This also highlights the need for replacement plots to be placed as close as possible to an existing plot that has been regularly used by Stone curlews.

Issue Specific Hearing 7, Biodiversity and ecology [REP-035] under item 3 Effects on Stone curlew and adequacy of proposed mitigation measures, page 2-3

“Dr Peaye confirmed the intention that the replacement plot be as close as practicable to the lost plot”

With this in mind, and taking into account that Normanton Down Reserve is part of our farm and our main ecological focus, we believe that mitigation plots should also be established on our farm. This will act in part for compensation for the potential damage that increased recreational pressures may bring onto our Reserve on which a considerable amount of Government and private money has been invested.

The Great Bustards have indeed bred on and continue to frequent Normanton Down. There have been no surveys carried out by the Applicant to establish this, however, data to support our claim can be gained from the GBG direct.

18.1.5

Mowing was mentioned as the most destructive mechanism for managing grassland. Adding to this, Salisbury Plain with its high diversity of rare invertebrate species, it's highly likely that the habitat created could attract in a lot of those rare species. There is the risk for the new grassland to act as a sink for those species that are being attracted in if mowing is going to be taken as a serious management tool. Grazing is the obvious establishment management tool to be utilised within certain areas of the new habitat.

The Applicants Response

See response to items 9.5.6 and 9.7.14 in the Comments received to Deadline 3 [REP4-036]. The cutting and grazing management measures that will be considered for incorporation into the Scheme will be confirmed through a combination of the detailed landscaping scheme to be submitted under Requirement 8 and the LEMP, prepared under the framework contained in the OEMP (MW-LAN1) [REP4-020]. It should be noted that the incorporation of a mixture of cutting and grazing management strategies is supported by Butterfly Conservation [REP2-193]. As detailed within agenda item 6 in the oral submission report from ISH6 regarding Biodiversity and Ecology [REP4-035], the Applicant summarised that any grazing locations will be confirmed during the detailed design phase of the Scheme

M & R Hosier response to 8.36

We acknowledge the Applicants response that *“grazing management measures to be incorporated into the Scheme will be confirmed through a combination of the detailed landscaping scheme to be submitted under Requirement 8 and the LEMP, prepared under the framework contained in the OEMP (MW-LAN1) [REP4-020]”*. However, we remain of the opinion that this needs to be agreed now to prevent problems developing in the future and avoid unnecessary expenditure.

We respect the comments from the Butterfly Conservation, but there are a whole host of other invertebrate species other than butterflies that are already present in the area, some of which are on the endangered list. This was identified by the invertebrate studies carried out for the Scheme.

6.3 Environmental Statement Appendices Appendix 8.11 Invertebrate survey report.

Page 35, under item 5, conclusions notes *“all 8 sites included in the 2017 survey have been shown to have a significant invertebrate fauna.”*

The report goes on to say *“However, the Countess Cutting CWS and Arable 1 (Normanton Gorse Wood on its southern and western wide conservation margins) sample sites also have an exceptionally rich invertebrate fauna found in association with early-to mid-successional chalk grassland habitats and wide arable margins respectively;”*

The report continues to say *“these are also of at least county importance for invertebrates. That found on the wide arable margins at the Arable 1 site (Normanton Gorse) demonstrates that the adoption of conservation headlands here is certainly having benefits for invertebrates.”*

Second paragraph notes *“Diamond Wood and the Arable 2 and Arable 3 sample sites are somewhat less diverse, but still have important invertebrate assemblages of local and county importance.”*

6.3 Environmental Statement Appendices Appendix 8.11 Invertebrate survey report.

Page 28 item 4.5 Arable 1

“The focus of invertebrate study effort here was on the side conservation headlands the owner has retained around the edge of the field, with these running along the entire southern and western edges of Normanton Gorse. The headlands have a two-tiered structure, with a more frequently ploughed strip adjacent to the crop and a less disturbed zone running up to Normanton Gorse. This structure creates an excellent range of vegetation structures, from sparse vegetated soil at the crop edge, through taller and more closed growth of forbs through to rank grassland and scrub. Such graduations in structure are known to allow the development of diverse assemblages of invertebrates.”

The above passage notes the excellent range of vegetation structures that have been created for invertebrates. This area is created by mowing no more than half the area once a year, and mowing the whole area only once every 3 years.

We would suggest that the Applicant has chosen to concentrate on only the colourful invertebrates within its management strategies, neglecting other Red Data Book species and others of National Scarcity that would require a range of habitat structures as noted within the survey document report above. Just because these invertebrates are small, not often seen and drab in colour, does not mean that they are of any less importance than the butterflies. Therefore, there is a duty to provide a habitat for these species as much as for the butterflies alone. As previously stated, we are concerned that the management of the chalk grassland around the western portal and cutting will

act as a sink, drawing in the important species already present within the area, only to be destroyed by mowing more than once a year.

The Scheme is billed for enhanced biodiversity, not for destroying the biodiversity that is already present within the area.

18.1.6

Pointed out that the area between the A303 and the deep cutting that is currently under our ownership I don't see why that has to be taken out of our ownership, I don't see why it can't be managed under agreement in our current ecology management scheme. I struggle with the target purpose. We hear about the management and the monitoring and I have asked repeatedly if we can be told what target species are being put forward for the different areas. What are the target species with the area between the A303 and the deep cutting and green bridge 4? I fail to see how you can put together a management plan when you don't know what you are targeting

The Applicants Response

See response to item 9.7.12 in the Comments received to Deadline 3 [REP4- 036]. The area is to be managed to facilitate the movement of calcareous grassland invertebrates and floral species. As stated in the OLEMP (paragraph 5.1.1) [APP-267], for the Scheme as a whole, the objective for the proposed areas of calcareous grassland is to provide diverse mosaics of the early stages of successional calcareous grassland communities, ranging from sparsely vegetated bare ground and rock through to closed, species-rich swards, such as the more open calcareous grasslands traditionally present in areas of Salisbury Plain and Parsonage Down. Over time it is expected that chalk grassland will develop which has affinity to CG2 sheep's fescue (*Festuca ovina*) – meadow oat grass (*Avenula pratensis*) (CG2) community identified in the National Vegetation Classification, although this need not be the only target community. The Scheme will contribute to the improved habitat connectivity identified as a priority in Natural England's Porton to the Plains project. In accordance with the objectives of Natural England's Porton to the Plains project, habitat creation of chalk grassland within the Scheme is expected to be of benefit for butterflies of chalk grassland, such as Adonis Blue, Chalkhill Blue, Small Blue and Marsh Fritillary butterflies. Food plants for the larvae of these species would be included in seed mixes. The Blue butterflies have become abundant at the Weymouth relief road due to this approach

M & R Hosier response to 8.36

We now understand that the Scheme is targeting butterflies within this area with a short sward incorporating bare areas.

Species requirements

Adonis Blue feeds on Horseshoe vetch

Chalkhill Blue feeds on Horseshoe vetch

Small Blue feeds on Kidney vetch

Marsh Fritillary feeds on Devils-bit scabious

These wildflower species take a while to establish, so there is potential to require plant plugs to help them establish.

As outlined in our response to Comments received to Deadline 3 [REP4- 036], this will not provide hunting habitat for Barn owls and may even lead to the unfortunate situation where Stone curlews will attempt to breed within sub optimal locations resulting in an unsuccessful breeding attempt. We therefore, urge the Applicant to consider these facts when finalising the grassland management of this area.

We look forward to seeing the proliferation of butterflies within the area as their plant food establishes over the years, but hope it is not to the detriment of those species that are already present.

18.1.7

Concerned over comments in the OLEMP about dumping grass mowings. Where will these be dumped, or could the scheme be designed to remove the areas of mowing and instead graze the areas. This is quite important now, because we had an Accommodation Works meeting but we were unable to progress matters because land management has not been decided. Grazing requires provision for adequate fencing, gates and water

The Applicants Response

The placement or removal of arisings will be determined through a combination of the detailed landscaping scheme to be submitted under Requirement 8 and the Landscape and Ecology Management Plan (LEMP), prepared under the framework contained in the OEMP (MW-LAN1), this would avoid areas that are to be maintained as nutrient poor chalk grassland. See response to agenda item 6 in the oral submission report from ISH7 regarding Biodiversity and Ecology [REP4-035], the Applicant summarised that any grazing locations will be confirmed within the detailed design phase of the Scheme through the detailed landscaping scheme and LEMP. Where suitable to do so infrastructure such as watering location and stock fencing will be included to facilitate any grazing regime settled upon during detailed design.

M & R Hosier response to 8.36

We stand by our comments that with a forward-thinking design, areas could, where possible, be managed by grazing rather than the more high maintenance option of mowing. Grazing requires fencing and water provision but does not need an area to dump mowing materiel. Livestock have been successfully managing grassland pastures for biodiversity for thousands of years.

Presumably, the design will incorporate areas for mowing arisings to be composted, so this really is an area that needs to be sorted sooner rather than later, to avoid management issues.

Can the Applicant tell us how the top 2.5m of the chalk grassland of the deep cutting will be safely mowed?

18.1.8

I would just like to highlight the omission, I believe the importance of the unknown increased recreational activity that will be incumbent upon the south of the World Heritage Site and indeed where the Normanton Down nature reserve lies. We are not convinced at the moment, we are not aware of any baseline data having been collected on the current recreational pressure to compare with what might increase, currently discussions between, any discussions regarding any mitigation for potential disturbance to stone-curlew which has been discussed or raised by various people around this table today, those discussions have only been between the RSPB and Highways England at the moment and as far as we are aware the only mitigation suggested being new fencing for Normanton Down reserve. We would like to ask that the fencing is considered completely irrelevant, we have already made statement in our written representation to that effect so I wont go over the same thing now, however my client has not yet been involved in any discussion regarding mitigation for Schedule 1 breeding birds being disturbed at the reserve on her land and I request that it be noted as a request that she is involved in any further discussions and her views taken into account as the landowner.

The Applicants Response

Please refer to 9.5.2 in the Comments received to Deadline 3 [REP4-036], which details that visitor monitoring surveys have been undertaken, and are ongoing.

See also response to item 9.7.1 in the Comments received to Deadline 3 [REP4-036]. Further consultation will be undertaken with Natural England and the RSPB

M & R Hosier response to 8.36

Items referenced

9.5.2

See response to item 40.3.7 and 40.3.9 in the Comments on Written Representations [REP3-013]. The Scheme would not change Byways 11 and 12. Visitor usage of the PRoWs adjacent to Normanton Down has been surveyed and this is ongoing. The results will provide a baseline for any subsequent monitoring of visitor usage of the PRoWs.

Items referenced

9.7.1

The scope of the cumulative and in-combination assessments undertaken for the Scheme, as well as the assessments contained in the Applicant's Habitats Regulation Assessment documentation generally, are considered to be robust. Mitigation and enhancement measures are currently under discussion with the RSPB and Natural England and agreements will ensure that the measures provided will avoid any adverse impacts on the integrity of the SPA

M & R Hosier response to 8.36

Please refer to our reply to 9.5.2 Comments received to Deadline 3 [REP4-036]. There have been no surveys undertaken of visitor monitoring along byways 11 and 12 in the location of Normanton

Down Reserve. The Applicant has always courteously informed us when surveys will taking place within this area even, if they are carried out from the byways themselves. We have received no such emails relating to visitor monitoring surveys taking place along the byways. In addition, RSPB are unaware of any surveys that have taken place (Pers. Comm), which we would suggest they would know about, as they have been strong advocates of such a survey, as noted in their representations and SoCG.

Please will the Applicant provide us with the alleged report relating to surveys taking place along byways 11 and 12 in the location of Normanton Down Reserve.

18.1.9

I asked for a meeting with the Ecology Team but I had not been given one. I had a last minute on the agenda of the Accommodation Works meeting which was my first meeting to discuss the ecology and the chalk grassland but apart from that I have had nothing

The Applicants Response

The Applicant is continuing to discuss a range of issues with relevant landowners. The Applicant intends to have further discussions with M&R Hosier during the examination period as part of these discussions

M & R Hosier response to 8.36

We look forward to fixing up a meeting with the Applicant to discuss the provision of additional Stone curlew plots, to mitigate potential negative effects on the breeding pairs at Normanton Down.

Comments on written representations

18.2.1

40.1.1 No information has been provided on the limits of deviation and whether that includes deviation of the length of the tunnel and the width of the carriageway. What is the width of area of the chalk grassland creation to the south of the tunnel? It appears that it will be another awkward are of land to manage that will be an added cost to the ongoing maintenance of the scheme, for questionable benefits.

The Applicants Response

The Limits of Deviation are included in Article 7 of the draft DCO [REP4-018] which includes the Tunnel (Work Nos 1E, 1F,1G). The Applicant has produced a signposting document [AS-009] to explain how the plans and DCO articles establish the parameters of the works for which the Applicant seeks development consent. The distance between the top of the southern retained cut, to the east of the western portal, and the Order limits to the south is approximately 50 metre and is located within plot numbers 06-02 and 05-35, shown on the Land Plans [APP-005]. In addition to the

cutting carrying the new A303, the Scheme in this area requires land for use as calcareous chalk grassland to the north and south of the cutting and over the top of Green Bridge No. 4. This would allow the maintenance of a consistent land use in line with that used at the top of the cutting. This forms essential mitigation in order to mitigate the impact of the cutting on the OUV of the WHS. The precise arrangement of the landscaping will be settled as part of the Scheme's detailed design, through a combination of the detailed landscaping scheme to be submitted under Requirement 8 of the DCO and the Landscape and Ecology Management Plan (LEMP), prepared under the framework contained in the OEMP (MW-LAN1). The Applicant does not consider that future management of this area will be 'awkward'. The area forms part of wider connected chalk grassland areas located to the west and east. Management of road side verges and land adjacent to the road and areas of cut is common practice across the national road network.

M & R Hosier response to 8.36

We understand the need for a consistency of land use in line with that used at the top of the cutting. This is why we are questioning the land management within this area. We take on board that it is common practice to cut grass along roadside verges and land adjacent to roads, but have health and safety concerns if the top of the cutting is proposed for mowing. If the grass tops of the deep cutting are to be long grass, and the grassland all around the remaining essential mitigation area is to be short early successional grassland, then there will be a distinct and unnatural difference in appearance of the area due to the grassland management regimes.

18.2.2

40.1.8 We disagree that the Applicant needs to purchase the area of land for chalk grassland creation around the tunnel. The area can remain within our ownership and be managed according to HE prescriptions under our environmental stewardship scheme. This, in our opinion, is a more cost effective approach. To date the Applicant has not engaged at all in terms of land acquisition required for the Scheme. It is untrue for the Applicant to refer to "agreements" as they have not produced any such agreement. Therefore, the use of CPO is both disproportionate and premature.

The Applicants Response

The Applicant has engaged, and sought to negotiate with, all persons affected by its proposed compulsory acquisition. The status of negotiations is set out in the Land Acquisition and Temporary Possession Negotiations Schedule [REP4-027]. The Applicant will continue to engage with all affected landowners on land acquisition. Negotiations led by the Valuation Office Agency have been initiated and will continue through the examination process, and progress will be recorded in future updates to the Land Acquisition and Temporary Possession Negotiations Schedule.

The provision of a suitable land use to the north and south of the cutting and over the top of Green Bridge No. 4, allows the maintenance of a consistent land use in line with that used at the top of the cutting. This forms essential mitigation in order to mitigate the impact of the cutting on the OUV of the WHS. The Applicant will explore with M & R Hosier an alternative to outright acquisition if that would prove sufficient to achieve the Scheme's aims, but until such time as an agreement is concluded the Applicant must maintain its position that full acquisition of the land is required to ensure that it can deliver and maintain essential mitigation for the Scheme.

M & R Hosier response to 8.36

We acknowledge the Applicant's decision to explore alternative options to Compulsorily purchase in relation to the area around the western portal and green bridge 4 and look forward to a meeting to further these discussions. We are of the opinion that an alternative option would have benefits to both parties and could be agreed within a legal document.

18.2.3

40.1.15 We have not noted any points within the Outline Environmental Management Plan (OEMP) [APP- 187] that refer to minimising the construction impact on the pig enterprise. Please can you direct us to these references.

HE has not shared with us a feasibility study of providing either temporary or permanent water to our farm should it be required. As such, we believe they are not taking seriously the potential impact that this could have on our business.

The Applicants Response

See response to items 9.3.3 and 9.4.7 in the Comments received to Deadline 3 [REP4-036]. Any potential construction impact on the pig enterprise will be managed through the measures outlined within the OEMP [REP-020]. The OEMP is not intended to define all measures across the Scheme which are required to reduce construction impacts, but to create the framework. The contractor will develop measures specific to locations during the production of the CEMP. Examples of items within the OEMP which will be developed by the contractor to minimise impact on the pig enterprise include (but are not limited to):

Table 2.1 – provision of an agricultural liaison officer.

MW-G7 – Management Plans

MW-G12 – MW-G14 – Working hours

MW-G29 – Site lighting

MW-AIR1 – Best Practicable Means (BPM) for air quality

MW-NOI1 – BPM for noise

MW-COM1 – notification of works

MW-COM2 – biosecurity (agriculture)

MW-COM7 – private water supplies (also detailed below)

MW-WAT11 – management of impact on abstraction boreholes (also detailed below)

The Applicant recognises the importance of maintaining water supplies to those landowners which rely on sources which could potentially be affected by the Scheme. The OEMP [REP4-020] contains specific items (MW-WAT11 and MW-COM7) which contain measures to minimise and reduce potential adverse impacts on abstraction boreholes and to ensure temporary or permanent water

supply is maintained. These measures are considered standard practice for schemes of this nature and are typical of requirements placed on contractors constructing such schemes. It is therefore not considered necessary to undertake a feasibility study of providing water (should this be required).

Extracts from items of the OEMP which directly address the maintenance / continuation of water supplies are as follows:

Item MW-WAT11 (management of impact on abstraction boreholes): 'The main works contractor shall, to limit and manage residual risk from groundwater pollution at abstraction points... put in place appropriate emergency measures to overcome the adverse impact where this has resulted from the construction works. These emergency measures may include the transfer of a potable water supply to another water source and informing the water users. Item MW-COM7 (private water supplies):

'Where an existing private water supply to a farm is adversely and directly affected by the construction of the Scheme, the main works contractor shall, if requested by the farmer or landowner to do so, provide or procure or meet the reasonable cost of the provision of an alternative supply of water (at the contractor's option).'

Further to these items, the Applicant can confirm that an amendment will be made to the Agricultural Liaison Officer (ALO) role within Table 2.1 of the OEMP to be submitted at Deadline 6. This includes an additional responsibility for the ALO to 'liaise with owner/occupiers to establish measures to be implemented to maintain livestock water supplies which may be affected due to construction works;'.

These measures are in addition to the general measures for the protection of people and communities set out in measures MW-COM1 to MW-COM8 of OEMP [REP4-020].

M & R Hosier response to 8.36

As stated within our 8.31 response, we do not believe the Applicant is fully appreciating the water risks to our farming business. In the event that our water supply or quality is compromised during construction, or once the tunnel scheme is in operation, our farm reservoir only has capacity for 24 hours. Therefore, we would need an alternative source of water to be provided within one day or an emergency slaughter programme would have to be initiated. With this in mind, we believe that it is the Applicant's duty to undertake a feasibility study for the provision of temporary and permanent water supplies. This is not a "standard scheme" as referred to; "standard schemes" do not involve tunnelling yet alone tunnelling through a very complex geological area. Therefore, a "scheme of this nature" would carry a responsibility for the Applicant to carry out water feasibility studies so that prospective contractors are fully aware of all potential issues.

The updating of OEMP Table 2.1 to include clause for the Agricultural Liaison Officer (ALO) to "establish measures to be implemented to maintain livestock water supplies" gives us no confidence. We have already provided a feasibility study of laying on water supplies to our business should this be needed, which highlights that it would not be possible to implement emergency measures within 24 hours. Added to this, there is no mention of what the ALO will do with the water network information he will have collected, so this is merely a box ticking exercise.

We do not believe OEMP {REP4-020} MW WAT11 is adequate to mitigate potential problems with our farm supply. See our response to Examining Authorities Second Written Questions at Deadline 6, Ag.2.10.

18.2.4

40.1.16 We remain unconvinced that the implications of flooding of the River Till have been fully assessed in respect to the potential contamination of water quality within the aquifer in this area. The Applicant admit they have no flow data for the River Till

The Applicants Response

See response to agenda item 6.1 in the oral submission report from ISH4 [REP4-032]. The potential impacts to water quality have been fully assessed in the Water Framework Directive (WFD) Compliance Assessment [APP-280].

Spot flow monitoring data for the River Till and River Avon from the Environment Agency was used to inform the development of the groundwater model which was subsequently used to inform the WFD Compliance Assessment.

The question does not make clear what mechanisms for contamination are of concern if the River Till floods. The Scheme is not changing the existing interaction of the River with groundwater.

18.2.5

40.1.16 TR010025 Environmental Statement Appendices

Appendix 11.5 Level 3 Flood Risk Assessment

5.3.5 There's a significant gap in quantitative calibration and verification data within the River Till catchment, as the watercourses entirely ungagged within the study area. As such, a quantitative assessment of the accuracy of the model outputs for this water course has not been possible, and liaison with stakeholders has been used to confirm that modelled outputs replicate as closely as possible to flood events experienced.

On the 11th June 2019 hearing the Applicant, ruled out the 1841 flood and ignored that of autumn 2000.

The flood in 1841 was due to the melting snow which resulted in waters 7-8 feet deep in the valley of the River Till. The Applicant have not used this data in their model dismissing the 1841 flooding as being irrelevant.

The Applicants Response

The lack of available information could not support a substantive validation on the River Till. However, the model has been peer reviewed by Wiltshire Council and its consultants and has been found to be robust.

There is also insufficient data available from the 1841 and 2000 floods to quantify their specific impacts against model outputs however the approach has been considered as robust by Wiltshire and their third party reviewers.

With respect to the questions around snowmelt and snow drift generally, this has been assessed where required within the FRA (see e.g. section 6.7) [APP-283]. No further work or study is required.

See also the Applicant's response to item 9.4.6 in the Comments received to Deadline 3 [REP4-036] and the response to agenda item 5.1 in the oral submission report from ISH4 regarding flooding [REP4-032].

M & R Hosier response to 8.36

We stand by our reply to Comments received to Deadline 3 [REP4-036] item 9.4.6

"We have concerns over the accuracy of the Conceptual site models used to assess the water movement within the geology of the Scheme landscape. See M & R Hosier Written Representation, Appendix 2 Groundwater Concerns – Report by Sweetwater Resources 2] Pages 2 to 6, Paragraphs 6.1 to 6.13 Paragraph 6.12 The model does not predict water levels to an accuracy which guarantees that there will not be a reduction of yield from boreholes during periods of low groundwater in summer, or that there will be no contamination. Therefore, HE is wrong to say there is zero risk to the water supply of Boreland and Westfield Farm. Mortimore et al Proc. Geol Assoc 2017 Figure 26 notes presence of many high permeability sub-horizontal fissures (dipping to the south) in the location of Stonehenge Bottom. As the tunnel is below the water table in this location and the exact location of the fissures will never be known unless the whole of the area is surveyed by core samples every few meters, it is not possible to assess the full damming effects that a tunnel will cause. Claims that the water will flow round cannot be accurately known until the tunnel is in place. There is a massive potential for the tunnel to alter groundwater flows far beyond the survey area."

18.2.6

40.1.16 Annex 2 Part A – River Till Hydrological Analysis

2.7.6 "The historic flood of 1841 was attributed to a combination of cold weather, snowmelt and heavy rainfall. Whilst flooding of this type is noted, this historic event was within the 'Little Ice Age' period circa 1300 – 1850 AD where climatic conditions do not reflect the current conditions of milder, wetter winters. The flood record is not considered to be stationary and the use of earlier records should not be used to assess present day flooding. Furthermore, a review of the Met Office 'Days of Snow Lying' annual average for the period 1961 to 1990 against the period 1981 to 2010 indicates that there is a decrease in snow lying days. The River Till catchment receives 5 to 10 days of snow lying on average and this is likely to decrease with climate change based on Kay (2016) (Ref 6).

The likelihood of the coincidence of significant snow depths combined with heavy rainfall and frozen ground is considered to be very low and not considered further within this analysis. 1841 flood

appears to have been due presence of snow and it's very rapid melting. The aspect which the Applicant ignores is the rapid melting of the snow produced rapid flow of water into the River Till.

What the Applicant has ignored is snow drift. The valley of the River Till comprises a large number of long valleys running east west with steep sides dissecting the southern end of Salisbury Plain. The River Till has a high stream density per unit area and therefore can trap large amounts of snow in drifts which had been blown southwards over the Salisbury Plain. Consequently, it is not the depth of snow which has fallen across the valley of the River Till but that which had been blown across Salisbury Plain and accumulated as drifts.

Warm weather would have come from the south west. Rapid melting of the snow would have produced water at the base of the snow drifts. The combination of steep sides of river valleys and water at the base of the base lubricating grass would have resulted in very low coefficients of friction would have meant the snow could have slipped down slope. If takes one valley at NGR (SU) 508100 14260 the slope is 20m in 100m which is 1 in 5 or 11.3 degrees which is sufficiently steep to cause snow to slip down over wet grass. Also there needs to be an assessment of the percentage of the River Till where valley sides exceed slopes of 8 degrees and where the grass is sufficiently long so it lies flat on the ground surface which increase run off.

The Applicant admits they have no flow data for the River Till as per paragraph 5.3.5, but:

The flash flood occurred at about 5pm on Saturday in January when the farm workers would have been at home, not in the fields and therefore being able to observe the rapidly melting snow and possible slumps. The dry valleys with their sufficiently steep slopes feed into the Till Valley above Winterbourne Stoke cover a wide area.

Another aspect which has been ignored is that the steepness of the valley sides could have caused cambering of the strata within the Chalk. Consequently rain and snow water would have flowed along the top surfaces of marl layers into the valleys. Cambering of geological strata is common where stronger more brittle layers overlay softer cohesive layers which deform creating dips into the valley. Also the formation of putty Chalk or called Dm Grade would have reduced infiltration of water and increased run off.

Consequently snow drifts rapidly melting to form which water which ran off the steep valley sides and then slumping into the valley bottoms, would have caused the flash flood.

The Applicant have also ignored the autumn 2000 Flooding. Quote from ANNEX B – Historical Flood Record “2000 Flooding within the wider River Till catchment – no further information available on extent, properties affected or source of flooding although likely to be a combination of high groundwater levels coupled with rainfall causing out of bank flows on River Till.”

The Applicant has not spoken to people living in Winterbourne Stoke and used the marks left on a willow tree to measure the elevation of the flood water. Photographs show the flood water on a willow tree to be 1.5m above the bank of the River Till. The heavy rain of autumn 2000 falling on steep valley sides, where the geological strata dipped due to cambering, possible putty Chalk at the ground surface produced flash floods.

What needs to be assessed is the overall area of steep sided dry valleys in the River Till Catchment. Many dry valleys are only 600- 700m apart and comprise steep slopes. The Coal Industry in its technical guidance, that on a slope of 0.2 with short grass even on sandy gravel the run off coefficient can be as much as 0.3. Long flattened wet grass would aid run off.

What may have been missed in the assessment of the flooding of the River Till's the stream density, which is length of stream channel per unit area. The River Till has a large number of dry valleys which will produce water flow after heavy rain. Consequently, the presence of cambering (para 7), steep slopes to the side of the valley, in excess of 8 degrees and long grass which had been flattened (para 11) and high stream density (para 12) would have produced greater run off than standard models.

As a consequence of this, the engineering works as a result of this Scheme, will reduce the ability of the valley of the River Till to transmit and increase the amount of discharge of water into it. Quote "10.3.1 River Till viaduct: the introduction of piers into the River Till floodplain has potential to interrupt flood flows and create a local backwater effect.

The Applicant admit the piers in the River Till will interrupt flows but there are other aspects that HE have not considered:-

- a. The construction of the foundations in the ground and piles of the bridges bridge will reduce the storage capacity of the hyporheic zone of the River Till and its ability to transmit water southwards. This will cause the groundwater to rise and increase risk of flooding.
- b. The road embankment on the eastern side of the River Till reduces the width and flood storage in the flood plain.
- c. The weight of the road embankment will cause compaction, closure of the fissures in the Chalk and so reduce storage and permeability of the ground.
- d. Runoff from the A303 will be discharged via ponds into the valley of the River Till and will increase the risk of groundwater flooding and pollution.

The questions which needs to be asked are:-

- a. Whether the Figure 5.2 River Till Flood Depth 15AEP Plus Climate Change 40% produces flood levels which are lower or higher than recorded in Autumn 2000 as shown by the mark on the willow tree and 1841.
- b. What will be the impacts of the engineering works mentioned in relation to the piers in the River Till on increasing the height of flood waters. Flooding always carries the risk for pollution should house drains be filled to capacity, causing dirty water to enter the groundwater.

The Applicants Response

With respect to the questions around snowmelt and snow drift, this has been assessed where required within the FRA (see e.g. section 6.7) [APP-283]. No further work or study is required.

With respect to the Willow Tree and wrack marks, if this information could be provided to HE we would be very grateful to take a view of this.

The impacts of encroachment of the floodplain by piers and embankments has been assessed within the FRA [APP-282].

The flood model accounts for displacement of flood water by piers and embankments associated with the scheme. Model results are presented within Section 8 of the FRA [APP-283], and Section 5.2 of Annex 1 Part A of the FRA Results demonstrate that the impact is localised around the scheme

only. The volumes of water displaced are very small when considered in the context of the total volume of water flowing through the River Till within an extreme flood event. As a result the model shows there is no increase in flood risk in the location of receptors such as properties and infrastructure. Therefore modelling presents no evidence to suggest that the engineering works would have an impact upon filling of property drains and subsequent pollution.

The hydrological characteristics and geological characteristics of the River Till catchment, including the presence of dry valleys, have been captured within the hydrological analysis undertaken for the River Till (Annex 2 Part A). Therefore the assessment undertaken takes into account topography of the Till catchment and valley, along with the underlying chalk geology to estimate flood flows in extreme events.

The embankment displacement is clearly documented within the FRA. With respect to displacement caused by piers during a design event, the volume displaced proved to be comparatively negligible when compared to the wider flow volume and rate experienced within the Till Valley. Any effects which occur are therefore expected to be locally experienced in and around the base of the piers only. As a result, this does not increase the flood risk to vulnerable receptors due to the location of the piers being situated sufficiently far away from populated regions and associated infrastructure.

18.2.7

40.1.17 As previously stated, fencing has already shown itself not to be a deterrent to trespass into our farm. The close proximity of byways to our holding bringing an increase in numbers of general public into the area will impact negatively on our farming business.

The Applicants Response

See responses on page 17-9 of the Relevant Representations Report [AS- 026]. The management and enforcement of the public right of way network will be a matter for Wiltshire Council, as the traffic and highway authority, to regulate. Fences along public rights of way would be provided to prevent access onto private land, grazed grassland or the highway

M & R Hosier response to 8.36

We remain concerned that suitable fencing is noted as being a matter in consultation with HMAG,. With this in mind, there is every chance that it will be aesthetically pleasing to heritage organisations rather than fit for purpose, ie to keep trespassers out. We would also respectfully point out that any fencing intended to be located adjacent to our land will require consultation and agreement from ourselves as well.

18.2.8

40.1.20 MW-TRA7

The Applicant has not assessed the impact of lorries on the Chalk when it is wet. The haul roads can only be designed when the weight of the lorries, area of the tyre in contact with the ground,

acceleration and de-acceleration and frequency of their travel on them are known. To prevent damage to archaeological remains which could occur down to a depth of 1.5m below ground level, it may be necessary to construct haul roads with a thickness of 1.5m above existing ground level. In winter, ruts of up to 300mm are created along the tracks by 4 wheel vehicles, weighing 2 Tonnes.

Lorries could weigh 117 T. The most damage to the ground is produced when lorries accelerate and brake as it causes rucking. Also it will not avoid compaction of the Chalk when wet and reduction of percolation, hence meaning restoration to free draining pasture will not be possible.

The Applicants Response

Haul roads are proposed through the works to minimise the need for construction traffic to use public roads. There will be two categories of temporary haul road utilised during construction:

- Chalk haul roads
- All weather haul roads

Chalk haul roads would be contained wholly within the footprint of the permanent earthworks to avoid any additional impact to the underlying ground or to the archaeological assets.

The anticipated line of all-weather haul roads is shown in Environmental Statement Figure 2.7 [APP-061] Note that within the WHS these routes are also contained within the footprint of permanent earthworks.

See also the following references:

- [REP4-030] Summary of oral submissions put at Cultural Heritage Hearings, Agenda item 7.3 for explanation of different types of haul road.
- [APP-040] Environmental Statement Chapter 2, paragraphs 2.4.17 to 2.4.20 for description of the haul routes
- [APP-061] Environmental Statement figure 2.7 for location of allweather haul roads.
- [REP4-021] Outline Environmental Management Plan, item D-CH31 for commitment to constrain haul routes in WHS to the permanent footprint of the scheme.
- [REP2-025] Response to Written Questions CH.1.3 for impact of vibration on heritage assets from haulage and CH.1.15 for construction access detail in WHS west of the tunnel.

[M & R Hosier response to 8.36](#)

18.2.9

40.1.21 MVCOM4 and MW GE03 ES Chapter 10 Section 10.8

The Applicant has not undertaken tests to ensure that Chalk after vehicles have been driven over it and spoil deposited upon it, can return to free draining pasture. Chalk, when wet and trafficked, becomes a slurry and low shear strength spoil from the TBM will seep into the fissures and seal

them. Appendix 10.1, Preliminary Ground Investigation Report pages 105 to 110 discusses the extent and properties of structure less Chalk and Figures 6-35 and 6-36 PSD curves shows the fines content of Chalk graded at Dm and Dc see Figures 9 and 10. Most of the samples of Dm and Dc Chalk have fines contents greater than 10 %, so they will be susceptible to becoming slurries when their moisture content approaches their Liquid Limit.

The Applicants Response

For those areas where tunnel arisings will be deposited (east of Parsonage Down), the Applicant recognises that the properties of the material produced by the TBM may preclude restoration to best and most versatile agricultural land, and hence the Applicant proposes restoration to calcareous grassland instead

Paragraph 5.2.20 of the DAMS [REP4-024] states that, “wherever possible, construction plant will travel along the alignment of the Scheme using the footprint of the proposed embankments and cuttings”, minimising as much as possible the impact on any land outside the earthworks footprint that is to be returned to agricultural use on completion of the Works. As stated in Clause 5.2.27, and in accordance with MW-CH5 of the OEMP [REP4-020], the contractor will prepare a Method Statement setting out, inter alia, how it intends to prevent deformation of topsoil/ subsoil horizons and how the measures would be reversed following the end of construction. This will also apply to working areas, as stated in paragraph 5.2.18 of the DAMS.

As to the risk of the TBM spoil “seeping into fissures in the chalk and sealing them”, we would note that the particle size of the chalk fines is no smaller than that of the topsoil and subsoil that currently covers the chalk and which is currently regularly trafficked by agricultural plant to no apparent detriment.

M & R Hosier response to 8.36

The Applicant notes that the agricultural land at Parsonage Down will never be restored to agricultural status following the deposition of chalk from the tunnel boring machine, although it is deemed suitable for chalk grassland. We acknowledge that chalk grassland does not require a nutrient rich topsoil, but it does require a good structure to allow drainage and root penetration or grass will not grow. There is also the risk that compacted areas will act like dew ponds, collecting water that is unable to penetrate through the geology in its post Scheme structural status. We have concerns that once the ground is remodelled the whole of the ground structure will be altered beyond all foreseen knowledge with implications to groundwater recharge. The existing fissures within the area will be compromised over a large area with devastating consequences to abstractors in the surrounding area.

The Applicant refers to construction traffic keeping within the footprint of the Scheme, yet when Parsonage Down is to be modelled with the tunnel spoil, there will be traffic movements from vehicles heavier in weight than agricultural machines that will be running over the ground compacting each successive layer of tunnel spoil. The consequences of this remodelling work, with

heavy industrial plant on the structure of this area and groundwater recharge, are completely unknown.

We challenge the Applicant's statement that the particle size of the chalk fines are no smaller than that of topsoil and subsoil. Chalk, clay and silt are the building blocks of soil particles, which combine with organic matter to form soil particles. It is a known fact that heavy rains from summer thunderstorms, when falling on cracked sun baked ground, carry a risk of washing fine silt particles combined with organic matter down into fast flowing fissures, which have the potential to pollute the water courses.

Similarly, modern agricultural machinery is designed with low ground pressure tyres to prevent damage to the soils structure which we rely on to maximise our cropping potential. Construction traffic is of greater weights than agricultural machinery.

18.2.10

40.1.25 No one has carried out any comprehensive baseline studies on our soil unless it has been done without our permission and knowledge. Please supply the dates that these surveys were carried out so we can check with our survey records.

Have the detailed baseline surveys carried out only been desk top ones?

When will we be provided with the baseline study data of our various soil parcels.

The inherent fertility within the soil, as a result of years of the pig enterprise adding to the nutrient content of the soil need to be taken into account. We have not been told how this information has been incorporated into the survey.

We will compare this data with our own SOYL land mapping of our farm within the area of the Scheme for reference.

Soil characteristics are only as good as the reinstating programme. We remain unconvinced that HE are taking due care to minimise the impact of compaction on our land.

The Applicants Response

Detailed agricultural land classification (ALC) surveys have been undertaken across all the land that would be affected by the construction. The field survey work on Messrs Hosier's land was undertaken by Reading Agricultural Consultants in 2003 as part of the development of the earlier scheme. Those findings remain entirely valid as ALC is concerned with the long-term inherent physical characteristics of the soil and not with short-term management or nutrient status. Additional surveys were undertaken on other land parcels in 2018 to cover areas of land not surveyed in 2003. The survey findings will form the basis of the Soil Resources Plan, as required by item MW-GEO7.

Item MW-COM4 of the OEMP submitted at Deadline 6 has been amended to provide for the provision of Preconstruction Soil Statements. These will be used alongside the Record of Condition surveys (outlined within item MWCOM8) to provide a baseline schedule of soil condition against which the restoration of the soil will be assessed.

The surveys were undertaken in accordance with the established methodology set out in MAFF publication Agricultural Land Classification of England And Wales, Revised Guidelines and Criteria for Grading the Quality of Agricultural Land, October 1988 Soil fertility is not an ALC survey characteristic and so does not affect the results of the assessment undertaken.

Highways England has made commitments in respect of the restoration of land set out at items MW-COM4 and MW-COM5 of the OEMP.

M & R Hosier response to 8.36

We thank the Applicant for informing us about the Agricultural Land Classification situation. We would ask for a copy of this report as well as the survey carried out in 2018 on areas that were not included in the 2003 survey.

From this we understand that there have been no surveys carried out in respect of soil nutrient status. As it is the “good heart” of the soil that is as important as its classification and structure, we do not believe that the Applicant will take this into account when discussions with the District Valuer finally take place.

We would like to know what the Preconstruction Soil Statement will include and would wish to have a copy of this report when it is completed as well as a copy of the Record of Condition Surveys.

With no surveys to take place on soil fertility, how can the Applicant say that soil restoration will be to the pre Scheme status?

18.2.11

40.1.26 The Applicant is passing all responsibility for numerous areas of the Scheme onto the mains work contractors. The Soils Management Strategy is one of many items under their remit. Item MW-GEO3 of the OEMP has scant information in relation to how the soil nature and types will be assessed and no details of what the methods for stripping soil or restoring the agricultural land will be. We are just expected to leave all these critical aspects to the mains work contractor that knows nothing about our farm land and probably using very little base line data.

More detail is required please.

H E Response to 8.36

See response to agenda item 8.2 in the oral submission report from ISH4 [REP4-032].

Detailed ALC surveys have been conducted and the nature of the soil across the Hosier land is shallow medium silty clay loam top soils over chalk.

These soils are of medium resilience to handling and, provided soil movement is undertaken when the soil is dry and friable and in appropriate weather conditions, the soil will not smear or compact. An outline Soils

Management Strategy has been prepared and is included with Annex A.3 of the OEMP submitted at Deadline 6. This describes the methodology for identifying, moving and restoring soils and requires detailed method statements to be prepared. In addition to this, item MW-COM4 of the OEMP submitted at Deadline 6 has been amended to provide for the provision of Pre-construction Soil Statements. These will be used alongside the Record of Condition surveys (outlined within item MW-COM8) to provide a baseline schedule of soil condition at individual land holdings.

M & R Hosier response to 8.36

We thank the Applicant for providing more information and directing us to the Soil Management Strategy to enable better understanding.

We note that there is also to be a Pre-construction Soil Statement. Please can you direct us to where we would find out more information as to what this Statement will entail. We would ask to have a copy of the Pre-construction Soil Statement when it is completed.

18.2.12

40.1.20 There is too little data in MW-GEO3 for us to assess the suitability of the measures proposed for stripping, storing and restoring the soil to the landscape. But we have concerns that the full understanding of the chalk subsoil has not been taken into account.

The Applicants response

MW-GEO3 identifies the requirement of the Contractor to produce a Soil Management Plan. The SMP will be a substantial document and as MWGEO3 states, will not simply detail the classification and movement of the earthworks materials, but will in accordance with the referenced Construction Code of Practice for the Sustainable Use of Soils on Construction Sites address issues of sustainability soil quality, erosion, compaction and drainage,

The objectives of the Construction Code of Practice are:

1. Identification of soil resources at an early stage in the development process;
2. Improved planning of soil use;
3. Improved soil management during project implementation, including sustainable use of surplus soil;
4. Maintenance of soil quality and function both on and off site;
5. Avoidance of soil compaction and erosion (with a consequent reduction in flooding and water pollution);
6. An improved knowledge and understanding of soil at all levels in the construction industry, including soil amelioration techniques.

The Soil Management Plan, when produced in accordance with MW-GEO3, will address the concerns raised regarding the contractors understanding and respect for the soils and landscape along the route of the scheme. This fully takes into account and allows for any chalk.

In addition to the above points, an outline Soils Management Strategy has been prepared and is included with Annex A.3 of the OEMP submitted at Deadline 6. This describes the methodology for identifying, moving and restoring soils and requires detailed method statements to be prepared.

M & R Hosier response 8.36

We thank the Applicant for clarifying this.

18.2.13

40.1.29 This paragraph provides no information and just requires us to trust that the Mains Work Contractor will deliver a good service.

Will we, as the farmers of the land be consulted on reinstating measures? Will we even be provided with a copy of the Soil Management Strategy for our farm?

40.1.32 This statement provides us with no depth of information, and requires us to trust that HE has identified the relevant issues, as well as ensured this is passed onto the contractors who are obliged to adhere to various contractual obligations.

We would expect to be provided with a copy of the Soil Management Strategy that will be implemented for our holding.

The Applicants response

The reinstatement of agricultural land will be undertaken in full consultation with the land owner as set out in OEMP MW-COM5 [REP4-020].

The Soils Management Strategy will be developed by the appointed contractor following the guidance set out in the Defra Construction Code of Practice for the Sustainable Use of Soils on Construction Sites (2009) - secured through OEMP MW-GEO3 [REP4-020]. It will be informed by a Soils Handling Strategy and a Soil Resources Plan, as required by item MWGEO7.

Item MW-COM4 of the OEMP submitted at Deadline 6 has been amended to provide for the provision of Preconstruction Soil Statements. These will be used alongside the Record of Condition surveys (outlined within item MWCOM8) to provide a baseline schedule of soil condition against which the restoration of the soil will be assessed.

The Soils Management Strategy will form part of the CEMP and, as such, will be publicly available on the register of requirements

M & R Hosier response to 8.36

We thank the Applicant for clarifying this.

18.2.14

40.1.34 In terms of the specific points:

- Outline Environmental Management Plan (OEMP) [APP-187] (a revised version of which is submitted at Deadline 3) MWCOM4 requires that the main works contractor shall undertake inspections of restored agricultural land with the landowner/tenant and Highways England's soils experts (and valuer, if required) to assess the progress of the restoration. Should there be any concerns these will be assessed by all parties and appropriate remedial actions or compensation agreed within the parameters of the compensation code and/or any previous agreements made at the time of acceptance of the initial restoration works and handover to the landowner/tenant;
- Detailed field surveys and analysis of soil physical characteristics (topsoil and subsoil) have already been undertaken and these have informed the preparation of Figure 13.1 Agricultural Land Classification Plan [APP- 179]. OEMP MWG7 requires the preparation of the Soils Management Strategy (SMS) and MW-GEO3 requires the SMS to include a record of the nature and types of soil that will be affected; the field surveys and analysis data will inform the production of these documents;
- As set out above, OEMP MW-COM4 requires that the main works contractor shall undertake inspections of restored agricultural land with the landowner/tenant and Highways England's soils experts (and valuer, if required) to assess the progress of the restoration; this will necessarily require sampling soils;
- Soil structure takes time to repair and appropriate remediation actions will be deployed as required under the review processes described above. Whilst it is not possible to specify the particular actions and measures that will be required (such as the application of organic matter and muck through to mole ploughing and field drainage) at this stage, as set out in MW-COM4 and MW-COM5 the restoration process is intended to proceed in full consultation with the landowner/tenant.

The points referenced give far too little detail around the issues. We have concerns that matters are continually placed as the responsibility of the mains work contractor with the Applicant taking no responsibility and seeming to provide sketchy data for the mains work contractor to work with.

The Applicants response

The methodology, level of detail, and the timing of the preparation of the Soils Management Strategy (SMS) is considered entirely appropriate for a project of this scale.

An outline Soils Management Strategy has been prepared and is included with Annex A.3 of the OEMP submitted at Deadline 6. This describes the methodology for identifying, moving and restoring soils and requires detailed method statements to be prepared. In addition to this, Item MW-COM4 of the OEMP submitted at Deadline 6 has been amended to provide for the provision of Preconstruction Soil Statements. These will be used alongside the Record of Condition surveys (outlined within item MW-COM8) to provide a baseline schedule of soil condition against which the restoration of the soil will be assessed.

M & R Hosier response to 8.36

We are concerned that a lot of responsibility is being placed onto the main works contractor to complete numerous reports:

Soil Resources Plan, Preconstruction Soil Statement, Record of Condition survey, Soils Management Strategy, Soils Management Plan.

As the main works contractor has not been part of the Scheme, feeding in for necessary survey work, they will only be using the information provided for them by the Applicant. We do not believe that it is right that the Main Works Contractor shoulders all this responsibility, when it is the Applicant that is proposing the Scheme, having carried out all the survey work prior to Scheme construction. There is the risk that not only will the Scheme will be delayed due to unforeseen problems, but also construction costs will spiral out of control.

18.2.15

40.1.37 With the deep cutting within the landscape, there is the potential to sever social group of badgers

With such major construction works taking place along the length of the Scheme project, there is the strong possibility for this to impact on the badger population within the area. The suggested movements of badgers through the landscape as a result of creating green bridges will also make new territories available with the potential to spread TB to new areas. The real consequence of the tunnel scheme will be assessed by the results of annual TB testing and the level of increased damage to the scheduled monuments that seem to attract the badger populations. Nothing seems to be put in place to prevent further damage to archaeology by the increasing number of badgers.

The Applicants response

As summarised within item 40.1.36 of in Comments on Written Representations [REP3-013] and item 9.7.3 in the Comments received to Deadline 3 [REP4-036], badgers already cross the existing A303, the construction activities are not considered to result in new badger territories being created. There are social groups of badgers on the Hosier land and their main setts would be unaffected by the Scheme. The Applicant considers that the inclusion of green bridges and mammal tunnels, and the closure of setts as anticipated for the Scheme would have no effect on the TB risk.

Completely separate to the Scheme, Highways England is aware that a burrowing mammal strategy is being developed by the WHS Coordination Unit under a WHS Partnership Panel to investigate the scope to avoid or minimise the impact of burrowing mammals on scheduled monuments in the Stonehenge and Avebury parts of the WHS generally. This is one of the component strategies of the WHS Management Plan 2015 [REF], (Issue 11, pp.96-97) and is a priority for action in 2015-2021. The project is starting in 2019. Highways England is contributing to this partnership by funding the work on the burrowing mammals strategy from Highways England national Designated Funds.. A draft strategy is expected to be ready in spring 2020.

[REF] Simmonds, S. and Thomas, B, (2015) Stonehenge, Avebury and Associated Sites World Heritage Site Management Plan 2015. Stonehenge and Avebury WHS Steering Committees.

M & R Hosier response to 8.36

We will update the Applicant with any changes to our TB status during the years of construction and once the Scheme is in operation.

We are pleased to note that the Applicant is funding the burrowing mammal strategy being developed by the WHS Partnership and look forward to seeing the draft in Spring 2020.

18.2.16

40.1.41 We remain concerned as to the suitability of proposed access arrangements for our farming business. In the absence of detailed drawings we are not able to assess whether the width of the new A303 byway (noted as 4m wide) and the placement of the Kent Carriage Gates will provide adequate turning circle for us to get a tractor with livestock trailer/stock lorry into this area of the farm if it is needed for animal welfare concerns. Currently we can bring livestock into the far part of the farm using the existing A303 with no restrictions.

The Applicants response

Part 4 of the OEMP [REP4-020] commits the Applicant to ensuring ProWs are surface where appropriate to their use including by agricultural and land management vehicles (P-ProW1), and that gates will need to be sufficiently wide to accommodate agricultural vehicles and machinery.

Liaison would be carried out by the Agricultural Liaison Officer required by the OEMP to ensure that there is sufficient access utilising those gates.

M & R Hosier response to 8.36

The approach to the gates must be wide enough to negotiate gates when turning with long trailers to avoid vehicles getting wedged between the gateposts or eroding the surface edge of the byway in an attempt to get adequate space for turning. Erosion at the edge of the byway will lead to the byway surface being ripped up or developing deep potholes to the sides.

18.2.17

40.2.10 The attributes of OUV, Integrity and Authenticity are in relation to the whole WHS, so to damage one part of the site cannot be mitigated to enhance the setting of another part of the site. This statement demonstrates a lack of understanding of OUV and the inscription of the WHS as a whole. This point was well debated during the Issue Specific Hearing on Cultural Heritage.

As such, I disagree that there will be a slight beneficial effect on the OUV of the WHS as a whole, or that the OUV of the WHS would be sustained. For this statement to be true there needs to be no portals or deep cutting approach roads within the WHS.

The Applicants response

The Applicant agrees that this point has been fully debated on previous occasions, and refers to its previous submissions on the topic, for instance at written question G.1.1 [REP2-021], as well as the response to agenda item 3vi, 4i, 4ii and 4iii in the oral submission report from ISH2 [REP4-030] and appendix A of that oral submission report. These submissions detail the correct application of the World Heritage Convention as part of the UK's legislative and policy framework, and discuss ICOMOS Guidance, which identifies that the process of assessing the impact of the Scheme on the WHS requires consideration of harm against benefits.

In brief, in accordance with ICOMOS HIA guidance, both positive and negative impacts are considered against attributes of OUV integrity and authenticity and a judgment arrived at on the overall significance of effect, and it should also be noted that the Scheme has been designed to avoid assets that contribute significantly to the OUV of the WHS.

The Applicant also directs the reader to Part 3 of the Highways England Response to the Comments made at Deadline 4 by the Consortium of British Archaeologists, which provides a further explanation as to how the attributes of OUV, Integrity and Authenticity have been considered in relation to the whole WHS in support of the Applicant's position that this approach is correct and supported by the relevant guidance.

M & R Hosier response to 8.36

UNESCO Convention Concerning the Protection of The World Cultural and Natural Heritage World Heritage Committee 43rd session 30 June-10 July 2019 adopted **unchanged** its Draft Decision on the proposals for the A303 Stonehenge tunnel scheme (24th June -4th July 2018 in Manama).

WHC/19/43.COM/7B Page 205 under Draft Decision: 43 COM 7B.95 item 4:

Notes with concern, that although the current scheme, which is now subject to the Development Consent Order (DCO) examination process, shows improvement compared with previous plans, it retains substantial exposed dual carriageway sections, particularly those at the western end of the property, which would impact adversely on the Outstanding Universal Value (OUV) of the property, especially its integrity, and therefore encourages the State Party to not proceed with the A303 route upgrade for the section Amesbury to Berwick Down project in its current form;

The above passage is contrary to the Applicants statement that "Integrity" of the WHS has been fully considered, and notes the adverse impact that the Scheme would have on the OUV. The document continues under point 5.

Urges the State Party to continue to peruse design solutions which reduce further the impact on the cultural landscape and OUV of the property through longer tunnel sections, so that the western portal is located outside the property.

This highlights the significant negative impact the proposed Scheme will have on both the cultural landscape and the OUV which is contrary to the Applicants statements.

The Government is responsible for the final decision for the Scheme to proceed, but under the Governments obligations to the World Heritage Conventions (Article 4), constructing the Scheme as proposed would be in breach of its international obligations.

For all the above reasons we cannot agree with the Scheme in the current proposal. Covering the exposed deep cutting would comply with OUV criteria, but removing the scheme to a surface route outside of the WHS would both comply with OUV criteria and remove issues with groundwater impacts.

18.2.18

40.2.12 The area from the western portal and the deep cutting within the WHS is an area within the WHS that has remained undisturbed by modern infrastructure. The importance of this area has been confirmed by the archaeological surveys carried out. This showed the area has been in continual use over the Mesolithic, Neolithic and Bronze ages, so is a unique demonstration of how each era has respected the previous inhabitants yet built on the site introducing their developing culture as shown by the funereal monuments and evidence of every-day life. The western and eastern portals should not be in the WHS for the scheme to benefit the OUV.

We disagree that the scheme is minimally intrusive in western and eastern portals and approaches. Just because the deep cutting approaches cannot be seen from a few positions does not mean that they are not carved deep into the archaeology. Their presence can never be removed from the WHS as the current road can, therefore the damage is irreparable. The Scheme strips the whole of a section of the WHS adjacent to the Winterbourne Stoke barrows of all archaeology, as such, it is destroying the WHS and not protecting it.

We disagree that the Scheme improves the setting of the Winterbourne Stoke Barrow Group. There will still be the sight and sound of the road from green bridge 4, and the barrow group will still be severed from the opposite side of the WHS by a road as is the case currently.

References to limited archaeological remains within the footprint of the tunnel are obviously disregarding the longbarrow and barrow G1 that are in the location where the tunnel boring machine will be rising to the surface. The unknown damage that vibration of tunnelling will cause on these heritage assets has yet to be assessed. Once damage has been done to the structure and placement of items within the barrows it cannot be put back. We struggle with the idea of monitoring as what will be done should it be shown that there is damage caused by the tunnel boring machine in this area? More information is needed

The Applicants response

Highways England disagrees that the western portal area and its approaches is undisturbed by modern infrastructure as the existing A303 is approximately 20m to the north of the Western Portal's position, and the roundabout at Longbarrow is approximately 36m north of the western approach road cutting where it crosses the A360.

Regarding positioning of the western portal outside the WHS - this has been considered in Highways England's previous submission to the Examining Authority in our response to Written Question AL.1.29 [REP2-024]. Regarding moving the Eastern Portal outside the WHS, this has been rejected due to its impacts on Blick Mead and the River Avon Special Area of Conservation (SAC), see response to point 3.2.7-3.2.9 in the Comments on Written Representations [REP3-013].

Environmental Statement Chapter 6, Cultural Heritage [APP-044 – APP-054] and Heritage Impact Assessment [APP-195] recognise the impact of the cutting and have put in place appropriate mitigation to minimise its intrusion in key views including Green Bridge No. 4, the canopy over the western portal and suitable essential chalk grassland mitigation to aid landscape integration and minimise intrusion in key views [see APP-195, paragraph 9.4.43].

The archaeological remains along the line of the western approach cutting and the western portal will be the subject of detailed archaeological excavation and recording prior to construction as set out in the draft DAMS submitted at DL4 [REP4-024].

The assessment conducted by Highways England in preparation for submission of the Scheme documentation concludes that there will be an improvement to the setting of the AG12 Winterbourne Stoke Crossroads Barrows. Both the A303 and the A360, including the existing Longbarrow roundabout, will be removed from their present location immediately adjacent to AG12. The A303 will move 150m to the south and be built in cutting to remove the sight and sound of traffic from immediately adjacent to AG12. The benefits of this are demonstrated by the photomontages and CGIs presented in the ES Chapter 6, Appendix 6.9 [APP-218] (Figure 4, Figure 5 and Figure 7). Green Bridge No. 4 maintains the physical and landscape connectivity north-south and improves access through the addition of a Non-Motorised User (NMU) route across the green bridge.

Regarding the reference to limited archaeological remains - this is with reference to the footprint of the western approach road, cutting and western portal footprint.

Regarding potential vibration and settlement damage on the bowl barrow south of the A303 and north west of Normanton Gorse (Wilsford G1 barrow) NHLE 1010832 and the long barrow 250m north of Normanton Gorse (NHLE 1008953), Highways England have responded to these concerns at ISH5 agenda item 6 (iii). Regarding vibration and ground surface movement monitoring and appropriate in-tunnel mitigation measures, these concerns are also responded to by Highways England at ISH5 agenda item 6 (iii) [REP4-033]

M & R Hosier response to 8.36

The Applicant has chosen to misinterpret the question. The footprint of the land where the western portal and the deep cutting of the approach carriageways are proposed, is on arable farmland. Therefore, it is not disturbing the archaeological remains of our cultural heritage and the impact on the OUV of the property. We would also like to draw attention to the fact that the current A303 infrastructure can be removed from the WHS whereas the deep cutting will not only destroy the integrity of the WHS, it can also not be removed. We therefore we deem it to be more damaging to the Property.

Whilst recognising the measures that the Applicant has put in place at the western portal and deep cutting, there is still 800m of exposed dual carriageway and the western portal still remains within the WHS. UNESCO have already urged the Applicant not to proceed with this current design, and the Government would be in breach of its international obligations if it chose to disregard UNESCO's advice and proceed.

We would prefer to see the upgraded A303 to be located outside the WHS, rather than choose a longer tunnel or cut and cover of the exposed carriageway, as this will solve our issues with groundwater impacts on our farm borehole supply. However, removing the road from the WHS will

not prevent potential negative impact on the Stone curlews at Normanton Down Reserve from any increase in recreational pressures as a result of the Scheme.

The Applicant has an unrealistic approach to the archaeological remains along the line of the western approach and western portal. The “*detailed archaeological excavation and recording prior to construction*” will, due to the Applicants inflexible time table, be reduced to a level that only permits a basic investigation. This is akin to excavations that would take place for a car park in an area of little known archaeology. The quality of the excavations prior to Scheme construction need to be of WHS standards and agreed in advance with UNESCO.

The Applicant concludes that there will be an improvement to the setting of the AG12 Winterbourne Stoke Crossroads barrows by removing the A360, but the A303 is still within the WHS all be it 150 m south of its current alignment. Therefore, it will still be seen and **heard**, creating a negative impact of modern infrastructure on the OUV and integrity of the WHS property.

The Applicant is now saying that the “*limited archaeological remains*” are instead within the footprint of the western approach road, cutting and portal rather than in the alignment of the tunnel. Perhaps this is linked to the statements put out by the Applicant stating that “they had not found anything unexpected” during the archaeological excavations within this area. In fact, burials and large quantities of worked flint, along with other artefacts were removed and recorded from the site. All of these things would have been “expected” to have been found by the very nature of carrying out archaeological excavations among barrow cemeteries. In respect of the percentage area of the Scheme footprint that was surveyed in 2018, the stated low level of burial activity will be significantly higher once the whole area is excavated prior to the Scheme commencing. Cremations are also human burials although this fact seems to have been omitted when stating the low levels of burials within the area. If the Applicant says the archaeological remains found are limited then they can return them to our care, including the exhumed skeletons and cremations.

In relation to impact of vibration on Wilsford G1 and longbarrow NHLE 1008953 we note from the ISH5 the implementation of a bored tunnel is to preserve surface archaeology, so below surface archaeology was assumed to be collateral damage. The Scheme seems to always concentrate on what can be seen rather than considering the WHS as a whole including the below ground features. As Mr Macnab will be aware, G1 was not completely archaeologically excavated in 1960. The area was revisited for the 2002 Scheme where a further 20 satellite cremations were discovered in a small area to the side of the barrow. For this reason, we did not grant permission for the burial area to be disturbed by yet more archaeological surveys in 2018. ISH5 item 6 (iii) notes the TBM will be 18.5m below the surface in the location of the long barrow NHLE 1008953 yet there is no mention of how near it will be to the surface of G1 which is a mere 25 m from the western portal where the TBM is rising to the surface. We understand that the buried archaeology is held within a consolidated soil matrix but as the TBM rises to the surface the intensity of the shockwaves will increase as there will be less matrix to absorb the vibrations.

We can see no reference as to what actions will be taken, should the vibration monitoring show that threshold levels have been exceeded at the various monitored heritage assets. What sort of “head interventions” would be employed on the TBM to reduce vibrations?

18.2.19

40.2.13 Just because the archaeological finds will be recorded and displayed does not justify the destruction of this area of the WHS. Research and understanding are good, but not when they come as a result of destroying part of the WHS.

Preliminary works phase archaeological excavations would require 100% evaluation of the topsoil. The importance of the topsoil for understanding the WHS has been demonstrated on numerous occasions. All current independent survey work carried out in the WHS has a 100% evaluation of topsoil, so this would be standard practice for this scheme. This is the only opportunity to find out all we can about the people who constructed the monuments on the WHS, on whom our cultural heritage is based. The Scientific Committee have also put forward the need for 100% evaluation of topsoil.

The Applicants response

Highways England disagree that we justify the loss of the archaeological remains through preservation by record; see Appendix B: Applicant's response to submissions in relation to paragraph 5.139 of the National Policy Statement National Networks (NPSNN) in the oral submission report from ISH2 regarding Cultural Heritage and Blick Mead [REP4-030]. The impacts, as assessed in the ES, are not reduced by the ability to archaeologically record the archaeological remains in advance.

With regards to 100% sampling of the topsoil, Highways England disagree that every archaeological intervention within the WHS undertaken recently has required 100% sieving of the topsoil. This has been confirmed in discussions with Wiltshire Council and the National Trust. In terms of the opinion of the Scientific Committee in this regard, we also note that the Scientific Committee is made up of 13 independent experts in the archaeology of Stonehenge who do not all agree with regards to the need for 100% sieving of the topsoil. Each individual member of the Scientific Committee has their own independent opinions on this.

As stated by Highways England at ISH2 [REP4-030] agenda items 7 (i) and (ii), we are working with Historic England, Wiltshire Council and HMAG, alongside developing the Detailed Archaeological Mitigation Strategy through consultation with the Scientific Committee, in order to develop an intelligent, reflexive mitigation strategy that responds to the significance of the archaeology in an iterative manner.

M & R Hosier response to 8.36

Irrespective of Wiltshire Council and National Trust comments that not every archaeological intervention within the WHS has 100% sampling, we stand by our initial statement that the Preliminary works phase archaeological excavations would require 100% evaluation of the topsoil. This will be the last time this precious area of the WHS will ever be excavated, to discover the hidden secrets of our cultural heritage. As already proven, a large proportion of important archaeological evidence are found within the topsoil, and as this is the WHS, evaluation needs to be of the highest level.

Following the previous archaeological surveys carried out on our farm, which were overseen by Historic England, Wiltshire Council and HMAG, we have no confidence that the surveys will be carried out in a manner befitting the WHS. Bags of archaeological finds were left on site, along with archaeological equipment and no care was taken in reinstating the ground afterwards.

18.2.20

40.2.21 - No indication is given as to what measures will be taken should the ground movement monitoring stations show that there is a notable disturbance in the ground at the location of the scheduled monuments G1 and the long barrow in the line of the tunnel. It is not possible for the tunnel boring machine to go deeper to avoid these monuments, so how will potential damage be mitigated?

The Applicants response

Please see Highways England's response set out in the summary of oral submissions made at ISH2 regarding cultural heritage agenda item 7 (iii), DAMS paragraph 5.2.6-5.2.8 [REP4-030], which provides further information regarding the tunnel movement monitoring stations. In particular, with regards to the ISH2 response, this states that a detailed assessment of ground movement had been undertaken and the results were set out in Land Instability Risk Assessment Report [APP-278], ES Appendix 10.6. The risk assessment sets out the staged process taken to assessing ground movement. Highways England has then carried out an assessment of the effect of the movement on heritage assets above the tunnel to determine whether there would be any adverse effects. The assessment has shown that any changes to heritage assets would be negligible. The impact on those assets would be controlled through the tunnel activity itself; for the purposes of monitoring, a series of trigger levels would be established (informed by the assessment as to the maximum amount of settlement that could occur without having an adverse effect on archaeological features), in order to determine when there would be a need for intervention. If needed, intervention would be done within the tunnel alignment and would involve ground stabilisation within the tunnel (for example, grouting in the ground ahead of the tunnel boring machine). The Outline Environmental Management Plan (OEMP) submitted at Deadline 4 [REP4-020] sets out a requirement at Item MW-CH8 for the Contractor to develop a Ground Movement Monitoring Strategy including the identification of heritage assets that are at risk from ground vibration from the tunnel, or from ground surface movement caused by settlement. As part of this strategy, the contractor shall develop contingencies and identify measures to ensure the protection of assets.

M & R Hosier response 8.36

We thank the Applicant for their explanation, but are alarmed to discover that, in the event that trigger levels are encountered, ground stabilisation in the form of grouting in the ground ahead of the TBM could be used. Once again, we note that the main works contractor is responsible for yet more surveys in the form of a Ground Movement Monitoring Strategy.

We feel this is yet another example of where a 3D Fracman ground model would provide information ahead of the TBM, enabling the structural geology and fissure layout to be known in advance. Failing to carry out such a 3D model is hindering the main works contractor in the deliverance of the Scheme.

18.2.21

40.3.12 We disagree with this statement [item 40.3.12]:

Misrepresentation of private land

At no point does the consultation booklet make it clear that access will only be via the network of byways existing and new as a consequence of the Scheme. Access to the southern part of the WHS is just promoted as a result of the scheme. As such, the Applicant has themselves put the Stone curlew breeding population within this area under threat. The NT land at the northern part of the WHS is known to be open access land by the general public, as such, it is available for roaming and exploring. It would follow that general public could interpret that the whole of the WHS would be available once the Scheme is in operation.

With lack of clear reference to byways being the only form of access, the inference being that the A303 is the barrier at the southern part of the WHS, so removing the barrier the area becomes readily available.

The choice of words roaming and exploring used in the booklet is incorrect. Roaming means to walk without boundaries, so when used in conjunction with the word exploring, gives the impression that the whole of the southern part of the WHS is available for the general public.

The vast majority of the monuments in the southern part of the WHS are in privately owned land. So encouraging them to explore the monuments is inaccurate. There is no mention of this within the consultation literature.

The Applicants literature has not stated that the monuments within the southern part of the WHS are only available for viewing via a network of byways as they are under private ownership and do not form part of the EH or NT holdings.

Clarification of public rights of way at supplementary consultation

The Applicant provided clarity on public rights of way, with their status of use, ie BOAT/pedestrian/bridleways. But the booklet did not state that the byways would be the only means by which the southern part of the WHS would be available. If this was the intention then this should have been clearly stated. There was no statement that the land in the southern part of the WHS was privately owned.

NT land in the northern part of the WHS is open access but it still has public rights of way through it. The general public would easily assume that the whole of the southern part of the WHS would be made available once the road is removed into a tunnel.

No mention is made that the only access to the southern part of the WHS is only via the byway.

The Applicants response

Fences will be provided between private land and new public rights of way, similar to those existing along A303 and Byways 11 and 12. This will be developed in consultation with landowners (OEMP item MW-COM3) [REP4- 020] and in accordance with Highway Construction Details in the Manual of Contract Documents for Highway Works (MCHW) and Design Manual for Road and Bridges (as per item P-PROW2). These fences will prevent the public accessing private land. The consultation materials were making the point that removing the road from the WHS will open up the use of byways and other PRoWs either side of the existing A303.

M & R Hosier response to 8.36

We stand by all our comments made in 18.2.21. The Applicant has throughout consultation, wilfully promoted private land on the southern part of the WHS for roaming and exploring, omitting to state that there will be no access to monuments, only viewing via the network of existing byways. At no time have they sought to clarify that although the northern part of the WHS, being owned by the NT is open access, the southern part is privately owned and therefore not accessible on completion of the Scheme. In so doing, the Applicant has knowingly put the Normanton Down breeding Stone curlew pairs under threat due to potential increased recreational disturbance. This is contrary to Habitat Regulations.

The Applicant is already fully aware that fencing along byways 11 and 12 does not prevent the public accessing private land or those wishing to deliberately trespass. The Applicant has documented this within the Habitats Regulations documents in respect of negative impact on breeding Stone curlews.

Consultation materials were inaccurate and misleading to the general public, as well as putting our private farm business and the Stone curlews at risk.

18.2.22

40.3.13 Enhancing public access and connectivity has the potential to clash with another scheme objective to enhance biodiversity and wildlife within sensitive areas. We do not think that this clash of objectives has taken into consideration the current tranquil habitat of the southern part of the WHS which nurtures species rich biodiversity.

The Applicants response

Please refer to responses in Comments on Written Representations, paras 12.3.58 and 40.3.13 to 40.3.17 [REP3-013].

A key objective of the Scheme is to enhance public access and connectivity to and through the WHS. To achieve this, the scheme is creating a number of new restricted byways, including along the route of the old A303, while maintaining the existing network. Beyond the creation of new byways, the scheme is not seeking to alter existing byway designations, nor is it seeking to provide access on to or through private land. Recreational disturbance from use of byways 11 and 12 has been taken into account in the environmental assessment.

The creation of the new public right of way over Green Bridge No. 4 and the creation of chalk grassland on the bridge and on both sides of the cutting would provide both public access and enhancement for biodiversity.

M & R Hosier response to 8.36

We stand by our comment above, by increasing the numbers of people into the landscape this will have a negative effect on the wildlife already present within these areas.

Potential for recreational disturbance from use of byways 11 and 12 has been noted in the environmental assessment with its negative effects on the nesting Stone curlew pairs on Normanton Down.

Green bridge 4 may provide public access, but as previously stated, the views from Green bridge 4 will be of the traffic in the deep cutting and looking into the western portal, which the Applicant has failed to produce photomontages for. Green bridge 4 will be short grass alone with no hedge planting, so will be of limited biodiversity. The chalk grassland around the cutting will be long on the top of the cutting (as this will likely be too steep to mow) but the remaining chalk grassland area will be mowed short, providing inappropriate nesting opportunities for Stone curlew and inappropriate hunting areas for Barn owls.

18.2.23

40.3.14 The Applicant is failing to meet the Habitats Regulations, as they are not addressing the potential adverse impacts to Schedule 1, Annex 1 breeding birds at Normanton Down Reserve. No mitigation has been proposed. There is a lack of evidence provided by the applicant to “dispel all reasonable scientific doubt concerning the effects of the work envisaged on the site concerned as well as the unknown impact of recreational pressures once the Scheme is in operation”.

Biodiversity [APP-046] does not conclude “that no likely significant effects, including from recreational disturbance, would result on breeding birds”.

To Quote 8.9.35 Established stone curlew plots at Normanton Down are south of the Scheme and more than 500m from the area of works at the western portal and the landform already provides some screening relative to nest plots. Even if there is no closer nesting, there is the potential for birds to be disturbed on occasions if they are foraging in the area. With only low frequency of occurrence such disturbance would be minor and would not be likely to reduce breeding success and recruitment to the population. Mitigation measures have been provided in the OEMP to avoid the temporary indirect impacts of disturbance on breeding pairs of stone curlew, including the use of visual barriers. The bored tunnel would be constructed more than 10m below ground and noise and vibration from construction would be minimal at the surface and it would not be likely to cause any disturbance to stone curlew or other breeding birds at Normanton Down or in other locations near the route of the bored tunnel.

Therefore, the references in 8.9.35 have been taken out of context and are in respect of disturbance at construction activity, noting a requirement of visual barriers for mitigation. 8.9.35 is not in relation to recreational disturbance and continues into para 8.9.36. In addition, we challenge the stated low frequency occurrence of foraging disturbance to the Stone curlews nesting at Normanton. Stone curlews will travel up to 9 miles to forage for their young whilst they are rearing the chicks, so references to distances in excess of 500m for foraging disturbance are inaccurate.

Indeed ES Chapter 8, Biodiversity [APP-046] 8.6.15 (see below) Under Future Baseline Construction year baseline (2021) draws attention to the unknown applications and associations in relation to the increased residential dwelling and visitor pressures on the area, rather than the “no likely significant effects” stated in the Applicants response.

8.6.15 The majority of the land to be impacted by the Scheme has been classified as agricultural land and associated linear boundaries. As such, the biodiversity

baseline is unlikely to change significantly by 2021, unless any largescale changes in agriculture policies and practices occur. The known applications and allocations associated with the provision of residential dwelling (cumulatively approximately 2,000 dwellings) may result in an increase in visitor pressures on the areas surrounding the WHS; this may result in increased disturbance events on breeding stone curlews within Normanton Down RSPB Reserve.

The majority of other applications are unlikely to significantly change the biodiversity baseline at 2021.

Other references to disturbance under both construction and operation of the Scheme are found at:

ES Chapter 8, Biodiversity [APP-046] 8.7.5 under Construction

Disturbance: An indirect impact resulting from a change in normal conditions (light, noise, vibration, human activity) that would result in the important biodiversity feature changing its typical behaviour;

And

ES Chapter 8, Biodiversity [APP-046] 8.7.6 under Operation

Disturbance: An indirect impact resulting from a change in normal conditions (human activity) that would result in the important biodiversity feature changing its typical behaviour, such as changes in roosting behaviour.

Mitigation and enhancement for Stone curlews

We have asked for more information about the “screening” that is being proposed for mitigation. We can find no details of what the screening will be, how tall, will it be a living screen, how will the living screens be established if topsoil is removed prior to construction, how will establishment of screens be made during periods outside the growing season?

8.6.14 In the draft Statement of Common Ground between Highways England and Natural England, submitted to the Examination at deadline 2, at Issue reference 3.11, Natural England agrees there would be no disturbance of any other identified stone curlew breeding plot in the vicinity of the Scheme. In the Statement of Common Ground between Highways England and RSPB, RSPB is satisfied that indirect disturbance impacts on breeding stone curlew can be avoided with the implementation of suitable working practices during the construction phase.

Agree that there will be no disturbance of any identified Stone curlew breeding plot in the vicinity of the Scheme. But this does not take into account the juvenile Stone curlew population that will be returning to the area that may be reduced to breeding in more marginal habitat. This was demonstrated by the stone curlews that nested in the vicinity of the archaeological survey during summer 2018.

Stripping the topsoil off of the scheme area is creating a vast expanse of Stone curlew breeding habitat.

Indirect impact on breeding stone curlews may be reduced, but will only be avoided if there is no construction activity taking place in the surrounding area during the Stone curlew breeding season ie March-September.

We have asked for more details of mitigation screening methods in previous written material

The Applicants response

As summarised within the oral submission for ISH7 regarding biodiversity and ecology [REP4-035] and in item 30.1.9 of Comments received to Deadline 3 [REP4-036], the Applicant stands behind the contents of the SIAA, although please see the response to item 18.1.4 above in respect of the Applicant's proposals for the provision of further stone curlew plots as part of a package of mitigation and enhancement in respect of stone curlew breeding opportunities in the vicinity of the proposed scheme.

Please refer to paragraph 8.9.38 of the Biodiversity Chapter of the Environmental Statement [APP-046] that concludes the effects during the construction phase would be neutral and not significant to the conservation objectives and biodiversity integrity of the SPA. The in-combination effects associated with recreational disturbance during the operational phase is described within paragraphs 8.9.186-187 of the Environmental Statement [APP-046].

With regards to foraging stone curlew disturbance, please refer to item 9.5.1 in the Comments received to Deadline 3 [REP4-036] which summarises the working methods detailed within the OEMP [REP4-020] that are considered suitable and proportionate to avoid disturbances on foraging stone curlews. The construction activities would not prevent stone curlew from foraging in the vicinity. In addition to which, as evident from air photography and from habitat surveys for the Scheme [Environmental Statement Figure 8.5 Phase 1 Habitat Survey [APP-151] there is abundant arable and grassland within which stone curlews could forage within the wider Salisbury Plains area (within 9 miles of the Scheme) if stone curlew travel up to 9 miles to forage.

With regards to the mitigation measures incorporated into the construction phase, including screening measures that may be employed to avoid disturbance on nesting stone curlew, items PW-BIO5 and MW-BIO8 of the OEMP [REP4-020] highlight the measures that could be used and may include, but are not limited to maintaining areas of dense crops, installation of visual deterrents, and planting areas of quick grown crop to reduce line of sight

M & R Hosier response to 8.36

Referenced Document - Comments received to Deadline 3 [REP4-036] item 30.1.9: There is no item 30.1.9 within this document.

Point 18.1.4 referenced above within this report:

“As a result of these discussions, the Applicant is willing to commit to procure and provide two additional new stone curlew breeding plots. These would be in addition to the previously proposed new stone curlew breeding plots at Parsonage Down and Winterbourne Down (as reported in the Statement to Inform Appropriate Assessment [APP-267]). This means the Applicant will be providing a total of four new stone curlew breeding plots, forming an overall package of mitigation and enhancement in respect of stone curlew breeding opportunities in the vicinity of the proposed scheme.”

M & R Hosier response to 8.36

The Applicants seems to confuse the documents; as Winterbourne Downs is referred to as “net gain” within the ES Chapter 8 Biodiversity [APP-046] but as “mitigation” for construction within the

Statement to Inform Appropriate Assessment [APP-267]. We welcome the news that there will be another two Stone Curlew plots to be established within the vicinity of the Scheme, to adequately provide for any displacement of the SPA Stone curlews at Normanton Down (should they be adversely affected by increased recreational disturbance). It is disappointing that the Applicant has taken this long to acknowledge the requirements made by the RSPB within the SoCG; in respect of an Annex 1 species. We would have expected this to have been considered within the Habitats Regulations from the beginning.

The Applicant states they stand behind the contents of the SIAA, yet the Scheme as presented would fail to meet Habitats Regulations as it fails to “**dispel all reasonable scientific doubt concerning the effects of the work envisaged on the site concerned as well as the unknown impact of recreational pressures once the Scheme is in operation**” The Applicant would have been aware of this for the past two years, so we are surprised by their reluctance to follow the guidance from Natural England and RSPB. As a result of this, the Applicant, to avoid triggering Habitats Regulations, HAS TO provide the additional two Stone curlew plots to mitigate any potential negative effects upon the two Normanton Down Stone Curlew breeding plots. Parsonage Down being in the footprint of the proposed Scheme had to be mitigated, but as already noted within Chapter 8 Biodiversity [APP-046] Winterbourne Downs plot was a net gain (RSPB Written Representation [REP3-013]) within the biodiversity legacy of the Scheme, and therefore would not be counted as mitigation for Normanton Down plots.

Mitigation for the two Normanton Down plots would need to follow the same criteria used to locate the new Parsonage Down plot, ie to be in as close a proximity as possible to be used by the displaced breeding pair. See our response in item 18.1.4 of this document above with regard to placement.

Construction effects (paragraph 2)

Document referenced, Biodiversity Chapter of Environmental Statement [APP-046] paragraph 8.9.38:

8.9.38

“The inclusion of the mitigation outlined above would result in effects that are considered to be neutral and not significant to the conservation objectives and biodiversity integrity of the SPA”

We disagree with the Applicant that the effects of construction phase would be neutral and not significant to the conservation objectives and biodiversity integrity of the SPA and stand by our previous statements within this point.

The only mitigation noted for Normanton Down Reserve plots within the Biodiversity Chapter of Environmental Statement [APP-04] is within the OEMP which we believe is lacking, as it fails to take into account the full life cycle of the Stone curlew species. See our comments in response to comments made at deadline 3 [REP4-036] items 9.7.15 and 9.7.16 (Stripping topsoil from construction areas and moving it to the perimeter of the works compound areas, then planting it with quick growing crops is not mitigation for on-site construction.)

Removing vegetation within the breeding season will always create a nesting habitat. We have still not been told what visual screening of the construction area will be.

As the construction of the Scheme will take six years, any impact on the local breeding population within this period will naturally have a knock on effect on the SPA population.

Statement to Inform Appropriate Assessment paragraph 5.2.1, notes the impact of the construction disturbance on Normanton Down, yet mitigation provided in point 5.2.4 is for Parsonage Down and not for Normanton Down.

The in combination effects associated with recreational disturbance

Referenced Environmental Statement [APP-046] paragraphs 8.9.186 to 8.9.187:

8.9.186

Disturbance: *The provision of the tunnel as part of the Scheme would facilitate future access by visitors and local residents into areas south of the existing A303 in the vicinity of the Normanton Down RSPB reserve and the surrounding areas which are known to support breeding stone curlew. The Scheme would provide easier access to byways 11 and 12 south of the A303. If there is an increase in use of the existing byways 11 and 12, this may result in greater disturbance of breeding stone curlew and an indirect adverse permanent effect on nesting success locally.*

8.9.187

The disturbance effects are influenced by a range of factors, including type of human activity, timing, frequency of occurrence, topography (which influences line-of-sight distance to nests), habitat, period in the breeding season and the experience of individual birds. Disturbance effects have been found to be greatest from dog walkers, less from other pedestrians and least from vehicles (Ref 8.67). The existing byways are fenced for purpose of livestock management at the Normanton Down RSPB reserve, which is likely to discourage, unauthorised public access to sensitive areas on adjacent farmland. As such, the residual effects are likely to be neutral and not significant.

M & R Hosier response to 8.36

With regard to the in-combination effects as per the above paragraph, the provision of two new plots in close proximity to Normanton Down will mitigate for the breeding attempts of SPA Stone curlew at Normanton down. However, there is still a need to mitigate for the construction activity in respect of foraging areas and the autumn Stone curlew roost.

Foraging disturbance to stone curlews

Referenced Document - Comments received to Deadline 3 [REP4-036] item 9.5.1:

“A large roost of stone curlews was recorded congregating on the RSPB Normanton Down nature reserve in autumn 2017, located over 500m south-east of the western portal. Measures to avoid disturbance of sensitive ecological receptors outside the limits of the scheme are considered suitable and proportionate to avoid disturbing the autumn roost of stone curlews.

PW-G4 and MW-G12 of the OEMP [REP3-006] set out the core working hours. Works that will occur outside of the core working hours include the use of the tunnel boring machine, which will be out of sight underground. Some lighting would be required at the western portal during construction of the tunnel, but the works would be in a deep cutting which would form a visual barrier, limiting light spillage as detailed within 8.9.35 of the Environmental Statement [APP-046].

MW-G29 of the OEMP requires the CEMP to include measures to minimise light spillage, particularly around the portals. As noted, stone curlews forage at night within the pig enterprise and the construction works would not prevent this foraging activity. It is to be noted that existing lighting from A303 traffic and Longbarrow roundabout would remain until the traffic was routed into the new tunnel. MW-NOI1 of the OEMP requires the use of best practicable means for minimising noise. In addition, PW-BIO5 of the OEMP includes specific mitigation measures in relation to stone curlew.

The Statement to Inform Appropriate Assessment [APP-266] is considered robust in terms of its assessment of construction impacts on the stone curlew population in the vicinity of the Scheme.”

M & R Hosier response to 8.36

See our response to Comments received to Deadline 3 [REP-036] item 9.5.1. Our reply highlights that within the Statement to Inform Appropriate Assessment paragraph 5.2.1, the impact of the construction disturbance on Normanton Down, yet mitigation provided in point 5.2.4 is for Parsonage Down and not for Normanton Down.

Referenced OEMP [REP4-020] for working methods suitable to avoid disturbances on foraging stone curlews. See our response to Comments received to Deadline 3 [REP-036] item 9.5.1. The birds are most active between dawn and dusk, but will also forage during the day.

The construction activities would not prevent Stone curlews from foraging in the vicinity, but they would present a considerable deterrent from their regular foraging grounds, especially if the Scheme is using their “visual deterrents” to prevent nesting activity. This will push the Stone curlews into competition for food with other birds. We agree that there are other areas of arable and grassland within the wider Salisbury Plain, but not all of these are suitable, as a large area is open access and would therefore not be acceptable Stone curlews.

Referenced OEMP [REP4-020] PW-BIO5 and MW-BIO8 for measures that could be employed in mitigation measures at construction phase. See our response to Comments received to Deadline 3 [REP-036] item 9.5.1 in relation to PW-BIO5 and MW-BIO8. The Applicant has still not said what the “visual deterrents” will be.

Measures to avoid disturbance on the Stone curlew roost

Comments received to Deadline 3 [REP4-036] item 9.5.1, the Applicants response is

“Measures to avoid disturbance of sensitive ecological receptors outside the limits of the scheme are considered suitable and proportionate to avoid disturbing the autumn roost of stone curlews”.

There are no direct references to the Stone curlew roost within the OEMP. PW-BIO5 and MW-BIO8 only referencing nesting and not the impact of construction works on the Stone curlew autumn roost.

The Applicant has not undertaken any surveys on the Stone curlew roost that occurs within the location of Normanton Down Reserve, so we do not believe that they are in a position to comment on what effect the impact of construction activity within the location will bring. For the Stone curlews within this local area Normanton Down has become a significant gathering point as shown by the numbers of birds that RSPB have counted on county wide roost surveys.

We find it shocking that the Applicant can promote a scheme as enhancing biodiversity and ecology when it has a detrimental effect on the SPA population of breeding Stone curlews within the locality. It places tourism and recreation above protecting wildlife.

18.2.24

40.3.16 The Winterbourne Down plot will provide additional nesting habitat for stone curlews but it will not form mitigation for any disturbance impact on Normanton Down as a result of increased recreational pressures resulting from ongoing residential building within the area. This is stated by RSPB within their Written Representation.

The Applicants response

As stated within 30.1.8 of the Comments on Written Representations [REP3- 013], the provision of the stone curlew plot at Winterbourne Down RSPB Reserve is considered a measure which would improve the resilience of the stone curlew population.

Please also see the response to item 18.1.4 above in respect of the Applicant's proposals for the provision of further stone curlew plots as part of a package of mitigation and enhancement in respect of stone curlew breeding opportunities in the vicinity of the proposed scheme.

M & R Hosier response to 8.36

Improving resilience of the Stone curlew population as a whole is a completely different thing to providing mitigation for impact upon specific individual breeding pairs of birds. The proposed new plot at Parsonage Down is intended as direct mitigation for the displaced breeding pair; yet the two breeding pairs that may be displaced from their plots on Normanton Down due to the potential of promoted and increased recreational use of the byways have no direct mitigation. These are only noted by the provision of "plots to improve resilience of the SPA population". How can this be meeting the Habitat Regulations?

18.2.25

40.3.17 The point we are making is that during the second consultation it appears that Normanton Down Reserve has been overlooked with its species rich ecology (Stone curlews) being ignored in favour of promoting the enhancement of Parsonage Down Nature Reserve (with the potential to attract rare birds). This is demonstrated by placing the map legend over the top of the Reserve. The orientation of the legend placement being inconsistent with the other maps in the booklet. For a scheme to truly provide biodiversity benefits the scheme would seek to protect the ecology of Normanton Down as well as look to extend Parsonage Down. But this has not been the case, as the SPA Stone curlew population at Normanton Down has been put at risk by the clash of scheme objectives, to protect Schedule 1 birds, but to also increase the numbers of people using the southern part of the WHS.

We are unable to see where the design of the scheme has taken into account the breeding Stone curlew population at Normanton Down.

The Applicants response

See response to item 9.5.2 in the Comments received to Deadline 3 [REP4- 036]. The Scheme would not change the location of the adjacent Byways. The Scheme proposals have taken into account sensitive ecological receptors.

M & R Hosier response to 8.36

The second consultation document placed the map legend over the top of Normanton Down Reserve thus obscuring it from the map. If Normanton Down had truly been taken into account, the Reserve would not have been obscured, especially as within the literature, there was reference to adverse effects as a result of construction and operational activities.

The Scheme has not changed the location of the adjacent byways 11 and 12, but it has promoted the southern part of the WHS for roaming and exploring which through combination effects has put the SPA Stone curlew population at Normanton Down at risk.

We are unable to see where the design of the scheme has taken into account the breeding Stone curlew population at Normanton Down.

18.2.26

40.3.17 Enhanced fencing for Normanton Down Natural England and RSPB have been in discussions with HE consultants in relation to the Stone curlew population since 2017.

We are disappointed that despite being the landowners of Normanton Down our requests for a meeting with HE ecology consultant were not granted until late March 2019. As such, we have not been able to feed into the proposed mitigation to add our years of experience working within the vicinity of Normanton Down. We respect the suggestions of the statutory organisations, but they do not understand the day to day issues, maintenance and practicality of their solutions.

We have already stated in our Written Representation that our experience highlights that enhanced fencing will not provide mitigation to Normanton Down. It would be a waste of taxpayer's money onto the already costly tunnel Scheme, and for no certain protection to the Stone curlews at Normanton Down from recreational disturbance.

The Applicant is failing to meet the Habitats Regulations, as they are not addressing the potential adverse impacts to Schedule 1, Annex 1 breeding birds at Normanton Down Reserve. No mitigation has been proposed. There is a lack of evidence provided by the applicant to "dispel all reasonable scientific doubt concerning the effects of the work envisaged on the site concerned as well as the unknown impact of recreational pressures once the Scheme is in operation".

The Applicants response

As summarised within the oral submission for ISH7 related to biodiversity [REP4-035] and in item 30.1.9 in the Comments received to Deadline 3 [REP4-036] the Applicant stands behind the contents of the SIAA, although please see the response to item 18.1.4 above in respect of the Applicant's proposals for the provision of further stone curlew plots as part of a package of mitigation and enhancement in respect of stone curlew breeding opportunities in the vicinity of the proposed Scheme.

M & R Hosier response to 8.36

As previously stated we are unable to reference item 30.1.9 in the Comments received to Deadline 3 [REP4-036] as the item does not exist.

The Applicant's oral submission for ISH7 related to biodiversity [REP4-035] omitted comments made by M & R Hosier which were also submitted at Deadline 4.

We stand by our comments that the Applicant did not "*dispel all reasonable scientific doubt concerning the effects of the work envisaged on the site concerned as well as the unknown impact of recreational pressures once the Scheme is in operation*" as required within the SIAA.

We are pleased to note that under the wording of "*..a package of mitigation and enhancement in respect of stone curlew breeding opportunities in the vicinity of the proposed Scheme.*" But will reserve judgement until we can assess what is proposed for the Normanton Down pairs of breeding Stone curlews.

19.2.27

40.3.22 We note Environmental Statement Chapter 8 Biodiversity [APP-046] paragraphs 8.9.141-144. But would draw attention to the fact that table 8.7 Summary of the study area for likely important biodiversity features does not include Great Bustard.

There were no field study methods or dates of surveys recorded in table 8.8 as per other noteworthy species so we question how the population can be assessed for the effects of the tunnel scheme.

There has been a lack of communication with the GBG to learn about the behaviours and habitat of the Great Bustards, so the statement relating to disturbance are not based on fact (GBG Pers. Comm).

Statements that no existing nesting sites would be lost to the proposed scheme are incorrect. GBG tried to contact HE consultants in spring 2018 to alert them to the fact that the archaeological surveys for the junction were taking place were in the location of nesting areas, but they did not engage. (GBG Pers. comm).

We have asked for the location of where HE believe the construction compounds will be visible to the Great Bustards.

No discussions have taken place with HE consultants as to appropriate screening for the compounds. (GBG Pers. Comm).

The Applicants response

As stated within 9.7.19 in the Comments received to Deadline 3 [REP4-036], the Great Bustard Group contacted and were responded to during the 2018 archaeological surveys and ground investigation works (GBG personal communication).

As stated within 9.5.4 in the Comments received to Deadline 3 [REP4-036] and agenda item 4.3 in the oral submission report from ISH7 regarding biodiversity and ecology [REP4-035], further consultation will be undertaken with the Great Bustard Group, this has been included within PW-BIO5 and MW-BIO8 of the OEMP [REP4-020] to aid the avoidance of disturbance impacts on great bustard.

M & R Hosier response to 8.36

We note the Applicant's comment that *"the Great Bustard Group contacted and were responded to during the 2018 archaeological surveys and ground investigation works (GBG personal communication)."* However, we would be interested to see what information the Applicant supplied to the GBG as a result of this communication in respect of mitigation for the impact of the ecological surveys that were to take place during the 2018 breeding season.

Please can we have a copy of the mitigation measures that they had prepared prior to the surveys taking place?

We are pleased that the Applicant is finally in discussions with the GBG. We hope that discussions will result in improved changes to the OEMP [REP4-020] in relation to avoiding impacts on the Great Bustards during construction, as well as removing the impact on the Great Bustard breeding grounds within the scheme.

18.2.28

40.3.23 We are pleased to note that Great Bustards are being acknowledged to have similar legal protection as Stone curlews.

But Page 29, PW-BIO5 notes that if works were carried out at a time or location that has the potential to disturb Annex 1 breeding birds then work shall be undertaken under a method statement. Although the Stone curlews have their own specific mitigation under heading, there is no heading for Great Bustards. But, it is not possible to set out method statement for Great Bustards as there have been no discussions with GBG to establish Great Bustard behaviour and habitat.

There is also a need for survey work to be carried out to understand the requirements of this species. This has been overlooked with this scheme. There are no reference to the fact the Great Bustard chicks are wholly dependent on their mother for 9 months as the species has an extended post-natal rearing period. This period is critical as they learn everything necessary to their survival. Mortality of young is extremely high, but once past 12 months their survival rate increases.

Preliminary works contractor (ecology) and mains work contractor ECoW should have prior experience of working with Great Bustards and specialist knowledge in this species. Liaison for monitoring and reporting would be with Natural England, Great Bustard Group as well as ECoW.

Survey work will need to be undertaken to establish the correct distance for exclusion zones around any nest. MW-BIO8 sets out measures for Stone Curlews. No survey works have been carried out to establish whether the same criteria for Stone curlews would also apply to Great Bustards.

The birds flush very readily from people on foot especially with dogs, they also move away from vehicles. But there is the potential for incubating females to be reluctant to leave the nest when the nest is directly impacted on by a vehicle, which can lead to the birds being run over. With the birds being difficult to spot when they are on nests this is of real concern.

Reference to suitable protective measures (such as visual or noise screens), this cannot be with reference to breeding birds? Must be in respect of dissuading birds from breeding in the area.

The Applicants response

Natural England confirmed in its submission at Deadline 4 [REP4-082] that "as a relatively recent reintroduction, the great bustard does not feature on Schedule 1 of the 1981 Wildlife & Countryside Act. Therefore, in legal terms, great bustard receives the same protection as other wild birds." but went on to state: "However, as great bustard are clearly very rare, it would be entirely legitimate to argue that it is of very high importance compared to other species. The degree to which such an argument is valid would depend on whether or not the latest evidence shows great bustards are self-sustaining (either currently or there is potential to become self-sustaining at some point in the future) as a population. We are not aware of this evidence." For the purposes of this Scheme the Applicant views the importance (and thus protection) of great bustard similar to Schedule 1 species.

As detailed within items 9.5.4 and 9.7.19 in the Comments received to Deadline 3 [REP4-036] and agenda item 4.3 in the oral submission report from ISH7 regarding biodiversity [REP4-035], further consultation will be undertaken with the Great Bustard Group. This has been included within PWBIO5 and MW-BIO8 of the OEMP [REP4-020] to provide similar protection from disturbance impacts for great bustard as will be provided for stone curlew. This is because, although the disturbance distance for great bustard has not been as well studied as that for stone curlew, the species is considered to be similarly sensitive to disturbance from human activity

M & R Hosier response to 8.36

We are pleased to read that the GB will be treated with similar standards as other Scheduled 1 species, to ensure that the reintroduction project is not jeopardised.

We are pleased to note that the Applicant is in consultation with GBG to ensure that the gaps of knowledge relating to habitat, behaviour and requirements of the Great Bustards can now be added into future updates of the OEMP.

We look forward to the improved updates within the next draft OEMP.

18.2.29

40.3.24 Furthermore, the grassland habitat creation (as secured at ref. MW-BIO2 in the OEMP [APP-187]) has potential to offer increased feeding areas for great bustard. Provisions of the Scheme such as the green bridges and diverting approximately 3km of the proposed Scheme into tunnel will also help to reduce the possible severance effects of the existing A303, and is likely to encourage dispersal into the wider landscape.

This statement shows a lack of understanding for the Great Bustard species. See M & R Hosier comments in respect of document 8.10.7 Question Ec.1.22 ii)5

The Applicants response

See response to item 9.7.23 in the Comments received to Deadline 3 [REP4- 036]. It is acknowledged that great bustard is not solely a grassland species and the use of arable in the Wessex area is recognised and was discussed with the Great Bustard Group. As stated within paragraph 8.9.143 of the Environmental Statement [APP-046], both arable and open grassland are both considered to be suitable great bustard habitat.

Great bustards are unlikely to be at risk from direct mortality associated with traffic (paragraph 8.9.223 of the Environmental Statement [APP-046]). The green bridges have therefore not been included within the Scheme as embedded mitigation for great bustard.

M & R Hosier response to 8.36

We are pleased to note that the Applicant is discussing the habitat requirements, behaviour and requirements of the Great Bustards so that there will be no impact on the species during construction and once the Scheme is in operation.

18.2.30

40.3.25 It is not possible to say that there are no records of GB nesting within the western section of the scheme as HE have had no formal meetings with the GBG at which to present data to feed into the reports.

It is incorrect to say GB have not been identified within the western section of the Scheme as GBG approached the Applicants ecology consultants in spring 2018 to inform them that they were undertaking archaeological surveys within the nesting grounds of the birds.

APP-157 is the redacted reports for Annex 1 species and Stone Curlews. These reports I have repeatedly asked for despite containing information that is on our farm and bearing in mind our close relationship with GBG and management agreement with RSPB. We were provided with the redacted report at the end of May, but the breeding areas had been redacted we had, therefore no one is able to confirm that APP-157 holds the correct information.

[APP-046] ES 6.1 Chapter 8 Biodiversity- see M & R Hosier response from M & R Hosier in respect of Biodiversity 8.10.7 Question Ec.1.22 ii)3. There had been 2 meetings with the Applicant as noted in [App-046] one of these being when M & R Hosier invited GBG along to a meeting with the Applicant Ecology consultant as the GBG had been unsuccessful in establishing communications with the Applicant. As such GBG have never been asked to contribute information to include in the document.

Further lack of understanding for the Great Bustard species is shown by the comments “GB are already within the area of the existing A303”. We believe the wording of the statement suggests the presence of fencing along the new A303, the downgraded A303 and other Public Rights of Way will prevent disturbance of the birds within the area. The Applicant have not carried out any surveys to

assess the response of GB to various disturbance stimuli and have not consulted GBG for behaviour responses of the species. Similar to most bird wild bird species GB are disturbed by human presence and dogs. As such, fencing along the byway will offer no mitigation to disturbance.

There have been no measures incorporated to mitigate for the increase in number of PRoW bringing more people into direct conflict with nesting and feeding Great Bustards.

The Applicants response

The data provided by the Great Bustard Group on great bustard nesting locations [APP-157] and the breeding bird surveys undertaken to inform the Scheme [APP-255] were considered suitable to determine the baseline and the impact of the Scheme (paragraphs 8.9.141-144 and 8.9.223-224 the Environmental Statement) [APP-046].

As stated within 9.7.21 in the Comments received to Deadline 3 [REP4-036], further engagement with the Great Bustard Group will be undertaken. This is secured in the OEMP [REP4-020].

With regards to disturbance issues associated with PRoW, please refer to 9.7.22 in the Comments received to Deadline 3 [REP4-036], the PROWs are to be fenced, as such, PRoW users will be separated from private land, for which there is vast expanses of land for stone curlew to nest within. The mitigation measures and embedded design included within the Scheme are considered suitable to avoid impacts on the local great bustard population. The reference to great bustard in the area of A303 was with reference to presence of great bustard north of the proposed Longbarrow junction, from information provided by the Great Bustard Group.

M & R Hosier response to 8.36

The Applicant has never provided anyone with Great Bustard nesting locations [APP-157] despite requests. The Great Bustard species was not included in the breeding bird survey to inform the Scheme [APP-255]. As such, we do not agree with the Applicant's statement that this information, together with the two referenced points within the Environmental Statement, is considered suitable to determine the baseline and the impact of the Scheme. We suggest it highlights that more dialogue needed to have taken place with the Great Bustard Group when these reports were being compiled.

Paragraph 3 relating to PRoW shows a lack of understanding of the behaviour and requirements of the Great Bustard species.

Whilst the fencing along the PRoW's may separate users of the paths, provided it is fenced with barbed wire and stock netting, it will not form any visual barrier for the Great Bustards unless hedging is also proposed. The Applicant has already stated in point 18.2.28 above "*...that although the disturbance distance for great bustard has not been as well studied as that for stone curlew, the species is considered to be similarly sensitive to disturbance from human activity*" It is both the sight and sound of general public and dogs that will be using the PRoW's that is the issue. It is relevant to note that the Great Bustard Group have secured funding and support by Wessex Water and have planted hedging around one of their release sites. This has been needed to reduce the visual disturbance caused by users of the PRoW (Pers Comm).

It is not the nesting sites of the Great Bustards that are the problem, it is the location of the new PRoW's and new Longbarrow Roundabout embedded within the Scheme that is the issue. There are no measures embedded into the Scheme design to mitigate for the increase in numbers of both PRoW and PRoW users bringing more people and dogs into direct conflict with nesting and feeding Great Bustards.

18.2.31

40.3.26 Due to a lack of willingness for consultation with the GBG to learn about the behaviour and breeding of the Great Bustards we fail to see how the proposed Scheme can be correctly assessed for the impact on the Great Bustard reintroduction project.

No work has been carried out the the GB species to determine what level of population is required to sustain the species. Indeed many other reintroduction programmes require population levels to be several hundred to compensate for poor breeding years.

We find it quite astounding that an Annex 1 bird has been overlooked throughout the Scheme putting emphasis instead on getting more people out into the surrounding area.

The Applicants response

Great bustards are an Annex 1 species that has been reintroduced into the Salisbury Plain landscape (for which there is extensive habitat within the surrounding area). At this stage, it is not possible to confirm that the introduced population is currently self-sustaining. The data provided by the Great Bustard Group on great bustard nesting locations [APP-157] and the breeding bird surveys undertaken to inform the Scheme [APP-255] were considered suitable to determine the baseline and the impact of the Scheme (paragraphs 8.9.141-144 and 8.9.223-224 the Environmental Statement) [APP-046]. However, as detailed within item 9.5.4 in the Comments received to Deadline 3 [REP4-036] and the response to agenda item 4.3 in the oral submission report from ISH7 regarding Biodiversity and Ecology [REP4-035], further consultation will be undertaken with the Great Bustard Group. This has been included within PW-BIO5 and MW-BIO8 of the OEMP [REP4-020] with a view to obtaining updated information regarding nesting locations of great bustard and to avoid disturbance impacts on great bustard.

18.2.32

40.3.31 We have asked a number of times if we can have a list of the biodiversity species that are being targeted at green bridge 4 and the area of chalk grassland creation between the current A303 and the deep cutting.

In respect of the area between the existing A303 and the deep cutting, there is already a large area of chalk grassland on NT land adjacent to the area, so question the extra biodiversity benefits of chalk grassland in this area.

Greater biodiversity benefits would have been gained from placing chalk grassland in an area of predominantly arable so bringing in new biodiversity and providing a stepping stone for species to connect within the landscape.

Porton to Plain project also notes that farmland birds are catered for in terms of all life cycles and stages including winter feeding provision. Stone curlew are amongst the farmland birds as are corn bunting and lapwing.

WHS management plan notes 8.5 Nature Conservation 8.5.4 It is important to retain the mosaic of different types of land use as this enhances its biodiversity value. Arable land is valuable as a habitat for specialist wildlife such as farmland birds, arable plants and hares.

Therefore it should be an aim to balance the needs of the archaeology, habitats for rare flora and the opportunities for farmland birds, for example provide wild bird food cover, grass margins and fallow plots when looking at strategic locations for reversion whilst reflecting the primary significance of the site. (Policy 3h/Action 59)

The Applicants response

See responses to items 9.7.2, 9.7.3 and 9.7.4 in the Comments received to Deadline 3 [REP4-036]. The position and width of Green Bridge No.4 was determined for heritage inter-visibility reasons, however the width of the bridge would provide safe crossing for other species, including bats, barn owls, reptiles, and other mammal species. The chalk grassland would facilitate the spread of grassland species as well as chalk grassland invertebrates. It would contribute towards the biodiversity net gain within the area.

Whilst farmland birds are an important part of the farmland eco-system, arable land is prevalent within the wider context of the landscape. The chalk grassland creation will provide east-west connectivity. The chalk grassland habitats created as part of the scheme would contribute to delivering the objectives of the WHS Management Plan for nature conservation (Policy 3h) in creating and linking chalk grassland. Policy 3h – Explore and develop synergies between the historic and natural environment to benefit the WHS and the maintenance of its OUV. Maintain and enhance the overall nature conservation value of the WHS, in particular: maintain, enhance and extend the existing areas of floristically rich chalk downland turf; enhance the biodiversity of permanent grassland to extend the area of species-rich grassland and provide habitat for birds, invertebrates, bats and other wildlife. Seek opportunities for the expansion of chalk grassland where consistent with protecting the WHS to sustain its OUV and relevant biodiversity targets. Extend and seek new links with relevant conservation bodies, programmes and initiatives.

M & R Hosier response to 8.36

All the species mentioned as potential users of the green bridge 4 are those that are already within the area. We therefore challenge the net gain within this location, other than for chalk grassland invertebrates that are suited to short early stage calcareous grassland. This is backed up by the lack of hedge planting and intention to manage the area for a range of grassland heights.

We still believe that in addition to the chalk grassland proposed that for the Scheme, provision is also made for farmland birds (as per Porton to Plain project) to deliver a number of biodiversity benefits as per WHS Management Plan 8.5 Nature Conservation 8.5.4 (Policy 3h/Action 59).

40.3.32 It is not possible to set out an ecology management plan if you do not clarify what species of flora, fauna and invertebrate you are targeting.

We have asked for target species in relation to green bridge 4 and the area of chalk grassland to be created adjacent to the deep cutting. Are there different species targeted for different areas, this is not made clear.

As previously stated within our Written Representation, the OLEMP [APP-267] lacks information on the seeding of chalk grassland, the methods to be used and the time of year. The dismissal of brush harvested seed from Salisbury Plain Training Area and the omission of certain wild flower inclusion due to their height. Statements regarding weed wiping and non-grazing do not indicate practical understanding. For a scheme to promote invertebrate species mowing is the most destructive management tool and will not provide the “low maintenance strategy” that is referred to.

The Applicants response

See response to item 9.7.9 in the Comments received to Deadline 3 [REP4- 036], which states that the position and width of Green Bridge No.4 was determined for heritage inter-visibility reasons, however it will also benefit a number of other species (as noted).

The chalk grassland would not be created and managed as one homogenous type. As stated in OLEMP (ES Appendix 8.26, paragraph 5.1.1) [APP-267] the objective for the proposed areas of calcareous grassland is to provide diverse mosaics of the early stages of successional calcareous grassland communities, ranging from sparsely vegetated bare ground and rock through to closed, species-rich swards, such as the more open calcareous grasslands traditionally present in areas of Salisbury Plain and Parsonage Down.

With regards to brush harvested seeds, please refer to item 9.7.13 in the Comments received to Deadline 3 [REP4-036], brush harvested seeds may be used, however, it is not considered appropriate to restrict seeding to wild harvested seeds.

With regards to mowing, please refer to item 9.7.14 in the Comments received to Deadline 3 [REP4-036], which confirms Butterfly Conservation’s support of the management regime. Butterfly Conservation highlights where suitable mowing and collection measures have been successfully implemented during the habitat creation of the A354 Weymouth Relief Road, Dorset.

M & R Hosier response to 8.36

Early stage successional calcareous grass would always overtime develop into a closed sward. Therefore, it would be the sward and flora heights that would be managed. Bare ground and rocks (?) other than mole hills and farm livestock activity, would only be sustained by frequently breaking up areas of the sward.

In respect of brush harvested seed, please see our response to item 9.7.14 within our Comments received to Deadline 3 [REP4-036]. With early planting as per OEMP [APP-267] MW-LAN4 and the use of reputable seed merchants as used at Normanton Down, this would be possible and would reduce the carbon footprint by sourcing local seed suited to the area.

The Applicant has not replied as to what the “other objectives” were, referred to under point 5 in relation to mowing.

We would like to know how the Applicant proposes to mow and collect the cuttings from the 2.5 m tops of the deep cutting embankments.

With regard to the A354 Weymouth Relief Road, we note that it was managed by mowing, but wonder how often this was carried out and if it is still being mowed currently. As stated previously, the A303 tunnel project within the WHS can do better by building on the lessons learned from Weymouth.

18.2.34

40.3.33 It is unclear whether the early successional habitats will remain as such within certain areas, or whether the intention is for them to develop over time to species-rich low nutrient swards. Early successional habitat is a phase of chalk grassland restoration, so it is not a final target.

Early successional chalk grassland consists of many undesirable weed species that have to be topped and managed possibly several times a year for the first three years to control. The grass height itself is not the issue, the weeds are the problem. Therefore, these habitats have the potential to produce inappropriate nesting opportunities for Stone curlews, Great Bustards, and red listed skylark and lapwing.

From experience, certain floral species are difficult to introduce into chalk grassland. Germination of seed requires both physical and chemical factors to break dormancy. It is quite possible that some species will never germinate even if introduced on a yearly basis. Chalk grassland takes many many years to establish with some species taking up to 5 years before they are detected.

The Applicants response

See response to item 9.7.13 in the Comments received to Deadline 3 [REP4- 036]. As described in the OLEMP [APP-267], the objectives will be to create a mosaic of early-successional habitats ranging from bare ground to a tight sward of species-rich low nutrient swards.

Confirmation of the habitat target will be included within a combination of the detailed landscaping scheme to be submitted under Requirement 8 and the LEMP, prepared under the framework contained in the OEMP (MW-LAN1) which will also include management practices to remove / manage undesirable weeds. It is agreed that grassland created on former arable land is likely to have more weeds which would need to be controlled than grassland created on nutrient-poor chalk substrate with minimal topsoil. Appropriate weed control would be carried out.

It is correct that seeds may require certain conditions to be met prior to germination, however, previous case studies, such as the Weymouth Relief Road, Dorset, indicate that early stages of calcareous grassland can be established quickly from seeding. As such, the Applicant has a high confidence in the establishment of suitable calcareous grassland habitat. It is agreed that the composition of the chalk grassland would continue to develop over time.

M & R Hosier response to 8.36

As previously mentioned, it is difficult to deduce whether the bare ground referred to within the early successional habitat will be maintained by mole action and farm livestock, or whether the Applicant intends to build in the creation of bare ground as part of the habitat.

We note that as with many other criteria within the Scheme, the main works contractor is responsible for preparing the detailed landscaping scheme prepared under OEMP (MW-LAN1). However, we would suggest that if the Applicant is unclear as to how the landscaping and management should be proposed, the main works contractor will be given free rein to create whatever they decide is easiest, as the guidance is minimal.

From our experience we agree that it is easy to establish calcareous grassland from seed in autumn. The skill comes in managing the various “ugly duckling” stages that the process goes through. As previously stated, calcareous grassland habitat is a lengthy procession to species rich status. Many flora species lay dormant in the soil for years before they show and this is the benefit of arable reversion over the quicker fix of minimal topsoil with a lower seedbank.

We would be interested to read about the chalk grassland creation methods and management for the Weymouth Relief Road. Please can the Applicant provide me with a link to this so we may better understand their references?

18.2.35

40.3.34 MW-BIO13 Botanical monitoring

Details of vegetation monitoring to be undertaken during the construction phase, to inform future habitat creation, shall be developed by the main works contractor in consultation with Natural England.

The ECoW (or an appropriate specialist) will undertake a programme of botanical monitoring to assess the development of mosaic of early-successional calcareous grassland and associated biodiversity within the Scheme.

Results of monitoring from the preliminary works period will be used to inform habitat creation and subsequent management. Management action informed by monitoring may include, but is not restricted to, increase or decrease in the frequency, extent or duration of grazing or mowing, control of scrub, specific habitat management to create or maintain conditions for characteristic species of chalk grassland or other habitats.

The above paragraph does not make its intentions clear. But following a discussion at Issue Specific Hearing 7, Biodiversity, we believe that it refers to monitoring of the heaps of topsoil removed from the Scheme by preliminary works that will subsequently be piled around the construction compound. The topsoil will be monitored for the early successional chalk grassland development and its associated biodiversity. This will inform habitat creation and management. If this is the correct understanding, we struggle how monitoring the development on the topsoil will inform this process as the topsoil will behave differently in a different aspect and having been extensively mixed. Arable weeds would predominate in this scenario. If no weed control is carried out on these topsoil stockpiles the weed burden on the soil will be vastly increased.

There seems to be confusion within the various documents. First the Applicant states that Under requirement 8 of the DCO, Highways England will be required to submit a detailed landscaping scheme, which is required to be on the basis of the mitigation measures set out in the ES, which

includes the OLEMP. But MW-BIO13 states that the ECoW will undertake vegetation monitoring to inform future habitat creation which will be developed by the main works contractor in consultation with Natural England.

Reading through documents, a lot of the final planning responsibility is being passed onto the contractors to complete rather than HE themselves. With such questionable information in the OLEMP, and the contractors not having been part of the process this approach is vulnerable to failure.

OLEMP [APP-267] notes that a landscape steering group will be set up to develop the management yet there is no mention of this within this statement from HE.

The Applicants response

As outlined in MW-BIO13 of the OEMP [REP4-020], botanical monitoring will be undertaken of chalk grassland created during the construction phase. It is anticipated that areas of landscaping would be completed at various stages within the construction phase. For example, the Winterbourne Stoke bypass and associated habitats would be expected to be seeded prior to completion of restoration of tunnel arisings at east Parsonage Down. The revised draft DCO submitted at Deadline 4 [REP4-018] requires the detailed landscaping scheme to be submitted for approval under Requirement 8 to include an 'implementation timetable for the landscaping works'. This scheme would be subject to Secretary of State approval.

The botanical surveys would inform future habitat creation and management to be undertaken during the construction phase and subsequently.

After seeding and planting, monitoring of vegetation would be used to inform management, such as weed control or mowing requirements and record the development of the habitat.

As touched upon above, it should be noted that the detailed landscaping scheme required by Requirement 8 of the draft DCO would be subject to Secretary of State approval. The Landscape and Ecology Management Plan (LEMP) required to be produced under the OEMP will be approved by the Authority (which is Highways England in this scenario), and as such, Highways England will have ultimate oversight of the documents that are being produced.

M & R Hosier response to 8.36

We are still curious as to how botanical monitoring of the chalk grassland created during construction, will bear any relation to the chalk grassland to be created over the minimum topsoil following the landscaping. Will the screening bunds around the working compound be predominantly chalk subsoil with minimal topsoil? From the reports we were lead to believe that the chalk subsoil and the topsoil were to be stored separately. Please can you provide us with additional information?

Perhaps botanical monitoring is no more than controlling the vegetative growth on the screening bunds, after identifying the species that are present? As with all agricultural land management, you can do the same thing a hundred times, and on each occasion you will get a different result. Therefore, although monitoring would be an interesting exercise, we do not understand how this will ultimately help with the management of the individual chalk grassland areas. Each of the

landscaped areas within the Scheme will be a different mix of chalk, topsoil and seed bank, so they will all behave individually in respect of vegetative growth. What will the chalk grassland mix planted on the bunds be, as this will ultimately add to the seed reservoir held within the topsoil?

We now understand that it is the Applicant, and not the main works contractor that has to provide the detailed landscaping scheme which will be submitted for approval under Requirement 8 to include an 'implementation timetable for the landscaping works' It is the LEMP that is required to be produced by the main works contractor, although it will be Highways England acting on behalf of the Authority that will have the final decision on what is agreed. This seems a very long winded approach, when the Applicant could just complete the whole body of work themselves, especially as they will have done the survey work ahead of the Scheme.

18.2.36

40.3.35 The Applicant has not answered our question as to what “other objectives” may be. These objectives may be critical to the land management and yet they are not provided for full understanding of the Scheme and for comment.

The Applicant has not provided a plan to show which of the chalk grassland areas will be managed by livestock and which areas will be just mowed. Although the Applicant has not directly stated, we believe that biodiversity is centred around invertebrate species, as such, we are concerned that mowing is being used for management. Rather than compromise the biodiversity by creating areas that are not suitable for livestock grazing, would it not provide greater benefits if areas were designed to facilitate grazing, otherwise the biodiversity becomes a secondary factor rather than a principal objective.

For fencing to be fit for purpose, the areas for grazing need to be confirmed and accommodation works need to be decided in consultation with livestock managers to ensure that grazing infrastructure is fit for purpose. OEMP had references to composting mowings in areas of scrub which is counterproductive to biodiversity. No plan of where these areas of scrub will be located.

We have great concern that throughout the OEMP there are references to the contractor developing the management plans rather than HE as Scheme promoter.

The Applicants response

See response to item 9.7.14 in the Comments received to Deadline 3 [REP4- 036]. The locations of any grazed locations will be confirmed during the detailed design process. Where grazing is incorporated into the management regime, effective stock-proof fencing and appropriate infrastructure (such as watering locations) will be incorporated into the design where suitable.

With regards to areas of scrub, these will be managed accordingly and confirmed in a combination of the detailed landscaping scheme to be submitted under Requirement 8 and the LEMP, prepared under the framework contained in the OEMP (MW-LAN1).

As detailed within MW-G7 and MW-LAN1 of the OEMP [REP4-020] the contractor will be responsible for developing and producing suitable management plans and relevant statutory consultees will be consulted during this process. The plans will then be approved by the Authority (which is Highways

England in this scenario), and as such, Highways England will have ultimate oversight of the documents that are being produced.

M & R Hosier response to 8.36

By leaving the decision for areas to be grazed until the detailed design process, there will be no feedback from farmers/landowners, as to where would be the most appropriate locations to site water troughs and gates. The locations decided by the Applicant may not be practical or provide the best land management within the areas.

We still believe that for the Scheme to deliver the biodiversity benefits, decisions on mowing/grazing infrastructure and locations of scrub for composting mowings need to be built in at this stage and not left main works contractors. If Highways England, as the Authority, has the ultimate oversight of the documents produced, then why do they not produce the body of work, especially as they have carried out the survey work leading up to the Scheme?

18.2.37

40.3.44 The green bridge only reduces the visual intrusion of the new highway within the WHS for the length of carriageway that it covers, therefore, the benefit is minimal. The visual intrusion between monuments is the same as the road will still be visible from the green bridge 4.

In addition the green bridge only offers connectivity to the landscape by the small area it covers. It does not allow connectivity to monuments.

The Applicants response

Please see response to item 9.7.8 in the Comments received to Deadline 3 [REP4-036].

The visual intrusion of vehicles in views between monuments is avoided by the road being in deep cutting across the western part of the WHS before it enters the tunnel. As such, it is by being in deep cutting that the visual links between barrow groups are maintained. Please also see Highways England's response to Written Question Ag.1.7. The visual intrusion will not be the same as the existing views of the road from the barrow groups as illustrated in photomontages and CGIs presented in the ES Chapter 6, Appendix 6.9 [APP-218] (Figure 4, Figure 5 and Figure 7).

M & R Hosier response to 8.36

The Applicant is merely removing the views of the traffic and replacing them with additional views of the modern infrastructure in the form of the entrances of the green bridge 4, the sides of the cutting and the western portal and the new Longbarrow junction. The visual links between the monuments are already evident so do not need to be maintained. Added to this, there is the presence of the four lanes of carriageway in a previously undisturbed agricultural part of the WHS as well as the reworking of the landscape at the top of the deep cutting.

Figure 4, CH03, Winterbourne Stoke Crossroads Long barrow. This shows the new Longbarrow junction, which we believe to be more obtrusive in the landscape than the Applicant has depicted. The Winterbourne Stoke Long barrow does not look out onto any other monuments within this area.

Figure 5, CH04, Winterbourne Stoke Crossroads round barrows. The views are confusing with no separation between the baseline and the new proposed views. The photomontage just indicating views south and east.

Figure 7, CH06, The Diamond Group. This is taken from a viewpoint that will not be accessible to the general public because it is on our farm and not from a PRoW. In addition, all of the Diamond Group except for the Longbarrow, are below ground, as is Wilsford G1 the location of which is not shown in the photomontage. G1 would have the new visual intrusion of the western portal in its sight line which it currently does not have.

18.2.38

40.3.45 The Applicant has neglected to answer our question as to what biodiversity species are being targeted by green bridge 4. If the target species are not stated then it is not possible to develop, manage and monitor the chalk grassland and biodiversity. Refer to our comments on document 8.10.7 the relation to information within the OLEMP.

The Applicants response

See response to items 9.7.3, 9.7.4, and 9.7.9 in the Comments received to Deadline 3 [REP4-036]. Green Bridge No. 4 has been designed to maintain a permeable landscape for a number of different species, including barn owls, badger, bats, polecat and hedgehog.

M & R Hosier response to 8.36

Thank you for answering our question. We will look forward to seeing the numbers of barn owls, badgers, bats, polecats and hedgehogs using the green bridge 4, although we doubt many of the species mentioned will use the bridge due to the lack of cover provided ie it will be all grass, and the general public and dogs using the new PRoW will also share the space with the wildlife.

When the Scheme is in operation, will there be surveys to assess the biodiversity benefits of the green bridge 4 for the above species once the Scheme is in operation? As far as I am aware, there have been no base line assessments for polecat and hedgehogs, and the bat surveys that are being carried out during August are not within the location of Green bridge 4.

18.2.39

40.3.48 Weed burden

This point could equally have been placed under Biodiversity heading, as the intention was to ascertain how ongoing weed control would be tackled on the top soil stock piles. Would the stockpile be sprayed with herbicide to remove all weeds, would the stockpile be mechanically

weeded by turning over the topsoil? If cover crops were to be grown what weed treatment would ensure that notifiable weeds did not establish and set seed?

The Applicants response

Soil stockpiles would be constructed in line with the recommendations set out in Defra Construction Code of Practice for the Sustainable Use of Soils on Construction Sites (2009) - secured through OEMP MW-GEO3 [REP4-020].

M & R Hosier response to 8.36

Would the stockpile be sprayed with herbicide, in order to remove natural regeneration growth that will occur over time? This is not covered in OEMP MW-GEO3 [REP4-020]

Would all the stockpiles of chalk and topsoil be planted with chalk grassland by the main works contractor, or would some be left unplanted?

18.2.40

40.3.48 Stone curlew measures

OEMP [APP-187] PW-BIO5 under Stone curlew notes the necessity to deter Stone Curlew from nesting within the proximity of the scheme boundaries. Point a) refers to the use of visual screens to block line of sight to avoid disturbance outside the Scheme boundaries. This shows limited understanding of the Stone curlew species. The preliminary works clearing of the ground will create ideal habitat for breeding Stone curlews by removing all the vegetation along the area of the scheme. No mention as to whether all the area will be cleared all at the same time or whether this will be done in stages.

There is no mention of the timing of the vegetation clearance in relation to the Stone curlew breeding season. The references to visual screening to block line of sight seem to be confusing the creation of Stone curlew habitat to the screening of breeding birds outside the Scheme. From the Issue Specific Hearing 7, Biodiversity we understand that the intention is for topsoil removed by preliminary works to be landscaped around the construction compound to create a visual barrier between the compound and Stone curlews within the wider landscape.

Point b) Referring to planting temporary areas of bare ground with quick growing cover crops as visual screening. It is not possible to grow quick growing crops of any nature on an area where the topsoil has been removed (although we struggled to understand why the top soil was being removed as it would create Stone curlew breeding habitat). From Issue Specific Hearing 7, Biodiversity we now understand that the intention was not to plant the area where the topsoil had been removed from, but to plant the piles of topsoil around the construction compound. But this will not prevent the Stone curlews from nesting on the area where the topsoil has been cleared.

OEMP does not therefore indicate how the expanse of bare ground created by the preliminary contractor will prevent Stone curlews nesting on the area.

We welcome the increase of the disturbance zone around Stone curlews to 500m in accordance with Taylor Et All report.

There is a crucial need for contractor's ecology staff to have prior knowledge and experience working with the Stone curlew species. This was demonstrated by the archaeological survey in 2018 at the western portal, where stone curlews nested within the survey area and the ECoW had to call on the RSPB Stone curlew team a number of times to locate the birds. The birds are notoriously difficult to spot even when you have experience with the species.

Monitoring and reporting would need to be between Natural England but to also include the RSPB Stone curlew team, as they are the organisation that has the necessary experience working with the species.

OEMP [APP-187] MW-BIO8 Refer to comments above for PW-BIO5. If the preliminary works contractor be different to the mains work contractor, then there is a similar need for the ECoW to be experienced with Stone curlew species. Monitoring and reporting would need to be between Natural England, RSPB Stone curlew team and ECoW.

No mention is made for mitigation for Stone curlews feeding in the vicinity of the Scheme and the potential for this to negatively impact on the successful breeding of the Stone curlews.

No mention is made that the breeding cycle of the Stone curlew is 10 weeks during which time the chicks are still dependent on their parents for survival

The Applicants response

As stated in the OEMP [REP4-020], vegetation clearance will, where practicable, be undertaken outside of the breeding bird season (unless specified) (PW-BIO4). As stated in PW-BIO5, it will be necessary (where practical) to deter stone curlew from nesting within, or in proximity of the Scheme, prior to the commencement of works. Deterrent measures installed would be site-specific and may include, but are not limited to, maintaining areas of dense crops, installation of visual deterrents, installation of visual screens, and planting areas of quick grown crop to reduce line of sight. Quick-growing crops would be expected to be effective where sown prior to the removal of topsoil, for example on the stone curlew plot which will be lost south of Parsonage Down.

With regards to ecological competency, please see response 9.7.17 in the Comments received to Deadline 3 [REP4-036]. As stated in PW-BIO5 and MW-BIO8 of the OEMP [REP4-020], an appropriate specialist will undertake the stone curlew monitoring.

With regards to monitoring, please refer to PW-BIO5 and MW-BIO8 of the OEMP [REP4-020], the RSPB and Natural England will be consulted. As detailed within item 4.2 of the Statement of Common Ground with the RSPB [REP2-017], long-term monitoring of the stone curlew plot utilisation within Parsonage Down SSSI and Normanton Down RSPB Reserve will be obtained from the RSPB and Wiltshire Council.

With regards to the breeding cycle of 10 weeks, it was not considered suitable to require the protection of the nest for 10 weeks, as stated within item 9.7.17 of the Comments received to Deadline 3 [REP4-036], a nest is considered active (and thus protected) until the chicks are no longer dependent on the nest (please refer to PW-BIO4 of the OEMP [REP4-020]).

M & R Hosier response to 8.36

So we may better understand, we have asked the Applicant a number of times to provide more information on what visual deterrents and visual screens may be, other than the planting of quick growing crops to reduce line of sight. As it stands within the OEMP [REP4-020], these are the only other measures to mitigate the expanse of bare ground created by the preliminary contractor to prevent Stone curlews nesting within the area.

We agree that quick growing crops would be effective in relation to the Parsonage Down plot (that will be lost), but fail to see where this would apply to other areas. It would be more suitable to maintain the existing vegetation within the Scheme areas, to deter Stone curlews, until work is imminent to start.

The Applicant must already appreciate, that the mitigation measures within the OEMP will not prevent Stone curlews from entering the Scheme area. We would suggest that there will be at least one nesting attempt every year during the construction process. With this in mind, we urge the Applicant to revisit the measures laid out in OEMP [REP4-020] as this will both ensure they are not in breach of Habitat Regulations, and will also avoid delays during construction due to nesting Stone Curlews.

As stated in our response to Comments received to Deadline 3 [REP4-036], our written summary of oral representation from ISH7 Biodiversity, and our comments on 8.30.7 response to the Applicant's written summary of oral submissions to ISH7, the OEMP [REP4-020] does not contain any assurances that the "appropriate specialist" referred to within PW-BIO5 and MW-BIO8 will actually have a depth of understanding of the Stone curlew species, and experience working with the species. It is highly likely, as has already been proven, that without adequate experience of the ecology of the species, the breeding Stone curlew may go unnoticed by the ECoW and nesting attempts would therefore fail. This situation would not happen if the Habitats Regulations were addressed properly.

See our response to Comments received to Deadline 3 [REP4-036], paragraph 9.7.17. We strongly suggest that the Applicant amends their point PW-BIO4 of the OEMP [REP-020] to include monitoring the Stone curlew chicks until such time as they are fledged. The chicks will be at risk of being run over by construction traffic as they are unable to fly and will just squat motionless on the ground until they have fully developed their flight feathers. If the chicks are not being monitored, then the contractors will not know if there are vulnerable Stone curlew chicks within the area to avoid.

We suggest that to comply with Habitat Regulations monitoring of Stone curlew chicks within the Scheme area is included within the OEMP PW-BIO4.

18.2.41

40.4.15 The non-statutory environmental body, The Great Bustard Group has not been consulted with in regard to details of Annex 1 Great Bustards.

We have tried a number of times to facilitate a meeting for them by inviting them along to the first ecology meeting that we had with HE consultants in November 2017, but they have been continually ignored with scant information in the ES, OEMP or OLEMP.

The Applicants response

As stated in Comments received to Deadline 3 [REP4-036] paragraph 9.7.19; there has been previous consultation with the Great Bustard Group prior to the commencement of archaeological surveys. The OEMP [REP4-020] provisions PW-BIO5 and MW-BIO8 have been updated to include Annex 1 species (i.e. including great bustard) and specific measures relating to great bustard have been added. As stated within PW-BIO5 and MW-BIO8 there will be consultation with the Great Bustard Group during the construction phase. Further measures which would minimise impacts on great bustard within the OEMP include the construction of bunds around the perimeter of compounds (MW-G28), to avoid visual intrusion and help to screen activity. These measures are considered suitable to avoid disturbance of great bustard.

M & R Hosier response to 8.36

The Applicant insists that there has been consultation with the GBG prior to the commencement of the 2018 archaeological surveys. Would they therefore be kind enough to give us with a copy of the method statement for mitigation they would have provided to the GBG following their consultation? It would appear that the GBG are not in agreement with the way the Applicant had considered disturbance during the breeding season.

OEMP [REP4-020] PW-BIO5 notes the production of a method statement, if works are to be carried out at a time and location that has the potential to disturb Schedule 1 breeding birds, ie construction works. We would hope that during the current discussions between the Applicant and the GBG that the birds behaviour, including response to disturbance, habitat and breeding requirements are all being built into the following updates of the OEMP.

The Applicant has previously informed us of the construction of bunds around the perimeter of the compounds (MW-G28) to avoid visual intrusion and help to screen activity. We responded to this in our reply to [REP3-013] point 40.3.22. asking which of the compound areas the Great Bustards will see, but we have had no reply. However, it is not only the visual impact of the compounds on the landscape. It is also the visual impact of the construction works that will be taking place throughout the Scheme footprint, within close proximity of the Great Bustard nesting sites and feeding areas that is of concern. There is no detail of screening for the construction works itself.

OEMP [REP4-020] has only been updated to include provision of nesting Great Bustards within the Scheme footprint. There are no specific measures to mitigate the impact of construction on the Great Bustards that are currently under a reintroduction project. There is nothing stating that Preliminary and Main works contractors will have gained satisfactory experience, through consultation with the GBG to ensure the necessary skills to detect and monitor the species are also included.

In addition, no measures have been included to screen the Great Bustards from the general public with dogs using the new PROW's.

We look forward to reading the next updated version of the OEMP.

40.4.19 Throughout our consultation responses we have made references to the errors. To name a few:

Inaccurate documenting of the signage around Normanton Down Reserve – there are no entry signs and the information boards do not state that the Reserve is open at certain times of the year.

Inaccuracies within the Barn Owl report showing a number of land parcels as arable when they are grassland.

The Applicants response

The Applicant notes this comment however confirms that the RSPB reserve has signs on the fence line that prohibit members of the public from entering the Reserve.

With regard to the barn owl habitat suitability and road casualties figure [APP- 156], please refer to item 9.7.10 in the Comments received to Deadline 3 [REP4-036].

M & R Hosier response to 8.36

Our main point, is that the errors the Applicant has made within the various DCO reports remain unchanged. As such, there is the real possibility that the main works contractor and other people looking to reference from these documents, will continue to use erroneous material. Those of us that know the correct grassland areas within the Scheme and the wording on Normanton Down Reserve signs, can interpret the reports. All others will be at a disadvantage.

Perhaps this is why within item 18.2.32 above the Scheme is noted as providing improved east west connectivity within the footprint? Fields that are already grassland have been recorded in reports as arable, so without the Applicant doing any additional habitat creation the east west connectivity is improved just by amending this error! This will go on to be recorded as improvement rather than erroneous baseline data.

18.2.43

40.4.22 Our grievances are numerous, but outlined below are a few references:

Minutes of meetings have been inaccurate and not provided until months later.

Requests for meetings between a scheme hydrogeologist and our independent hydrogeologist to allow discussions to allay our concerns with our borehole water supply had been ignored. Instead, we were provided with a last minute meeting with a GI survey hydrogeologist, and a last minute meeting with the water modelling consultant to which we were unable to bring our hydrogeologist.

Request for meeting with the ecology team was initially rebuffed having being told only the Applicant had the authority to grant meetings.

Meetings when granted are months, or even years later from initial requests.

There have been no meaningful engagement between ourselves and the District Valuer for negotiations on land take. No terms have been issued nor any indication of instructions to proceed with negotiations.

No account has been taken of our farming calendar or management practices in relation to surveys. Rather than plan surveys ahead at suitable times of year, surveys have taken place at critical stages of the year, causing at great destruction to our crops and a vast cost to the taxpayer. This could have all been avoided by better planning and engagement.

No account is taken of our years of experience in this area of the landscape. No account has been taken of our local knowledge. This has been demonstrated by the proposed use of dirt byways as access for archaeological surveys during the winter months.

Failure of the Applicants consultants to fully understand the layout of the WHS in relation to access for surveys that led to the damage of scheduled monument SM10317. This has been overlooked.

Clauses in survey licence agreements have been continually broken.

Payment for invoices relating to survey work carried out by HE consultants have to be constantly chased and are often overdue.

The Applicants response

The Applicant acknowledges, with apologies, that minutes of meetings have been provided late on past occasions; however, going forward, minutes of meetings held with Highways England will be made available to M&R Hosier and to the Planning Inspectorate where requested, or where required to be provided as evidence.

A meeting between the Hosiers and the HE groundwater modelling consultant was held on 29 March 2019. The effects of the Scheme on borehole water supplies are assessed in the ES and no likely significant effects are predicted [see Environmental Statement Chapter 11 - Road Drainage and the Water Environment APP-049, paragraph 11.9.3].

The Applicant will continue to engage with all affected landowners on land acquisition. Negotiations led by the Valuation Office Agency have been initiated and will continue through the examination process.

In terms of engagement with landowner, please see page 13-2 of the Applicant's Responses to Relevant Representations [AS-026]. The issue is also addressed in the Applicant's written summary of oral submissions made at the compulsory acquisition hearing held on 9 and 10 July 2019, submitted at Deadline 5. These confirm that regular meetings have been held with affected landowners, occupiers and asset owners, and such engagement will continue as the Scheme is progressed to ensure that those individuals' requirements are met wherever reasonably practicable. We note also that provisional land values have been provided by the Valuation Office Agency and related discussion between Mrs Hosier and Highways England continues.

With regard to access for surveys, Highways England has consulted and continues to fully consult with the landowner. Access points and routes are agreed before each survey and pre and post-condition surveys are carried out for all intrusive survey works along the access and works areas. Highways England will continue to manage survey works with farming activities and landowner preference where possible.

Furthermore, no scheduled monuments have been damaged as a result of Highways England's surveys. The Applicant is aware that unsubstantiated allegations of damage to scheduled monument Bowl barrow known as 'Bush Barrow' and to two-disc barrows south east of Normanton Gorse

forming part of Normanton Down round barrow cemetery (NHLE 1009618) have been made; however, Highways England strongly refutes the allegation that damage was caused by survey work carried out in connection with the Scheme. The scheduled monument was inspected by Historic England and no further action was taken by them.

M & R Hosier response to 8.36

The Applicant has misinterpreted our point in relation to meetings and engagement. We agree that there have been a number of meetings which have followed the Applicant's various stages of Scheme development. However, when we have asked for meetings to understand areas that are of key concern to our business, we have had to wait years for our requests to be accommodated –eg: a meeting to discuss water issues. So whilst there have been meetings, they have been to address the Applicants requirements, rather than to take on board the implications on our farming business.

We agree that there have been provisional land values issued, but this was just before the Issue Specific Hearing in relation to Compulsory Acquisition. We are informed by our agent, that it is very unusual for the Applicant to have only initiated discussions at such a late stage in the Scheme development.

Damage to barrow cemetery NHLE 1009618

There was damage to Scheduled Monument SM10317/NHLE 1009618. The gate used by the archaeological survey team, has not been use for agricultural machinery for many years, due to the topography (with the monument banks). Therefore, any change in this area through use were obvious. We photographed the area gouged by the tracked vehicle used by the Applicant, showing fresh chalk scars evident on the flank of the barrow.

18.2.44

40.4.23 Reports that are publically available have been provided but only after considerable delays and numerous requests. Typically, reports are received after the deadline date for responding to information. Other stakeholder organisation have been supplied with links to documents.

Information that is not publically available, ie requests for information to fully understand survey works (to prevent any further damage to our farm property or inconvenience for both parties) are a constant source of frustration. Rather than providing specific answers to our questions, we are given answers to questions we have not asked. In addition rather than providing answers we are served with Section 172 Voluntary or Final access notices. We have made it clear that we are not preventing surveys from taking place, we just need to ensure all issues are resolved ahead before they commence.

To mention a couple of other points, but by no means is this a complete list:

We have had to ask for pre-condition and post condition survey reports which HE fact sheets note as being provided for surveys. Often reports have taken months to arrive.

Pre and Post condition reports have been of such poor and inconsistent quality as to not be fit for purpose.

The Applicants response

Highways England notes this comment however wishes to clarify that the requests for reports have been made when they contained information that was not publicly available. However the information requested by Mrs Hosier is now publicly available and has since been provided to Mrs Hosier.

In respect of the use of S172 powers please make reference to page 13-11 of the Relevant Representations responses [AS-026]. We note that our preference for gaining access to land is through agreement with landowners, however where that has not been possible or project time constraints have been pressing, the use of s172 powers has been required.

Pre and post condition surveys have been carried out on each intrusive survey and are prepared for the benefit of the affected landowners. These surveys provide the basis for the compensation claims, and we note that none of these are currently outstanding with Mrs Hosier.

M & R Hosier response to 8.36

The information we requested was pertaining to our holding and to better understand the survey requests. As is the case with other organisations that carry out surveys on our farm, that we maintain that the Applicant should provide us with copies of their data. The Applicant has provided us with information from time to time, but often the information is completely different from what we have asked for. The Applicant asks us to meetings to provide them with feedback, but if they do not provide us with the information we require to give informed feedback, this makes a mockery of the whole process. This is knowledge management rather than meaningful consultation with stakeholders.

At the first meeting with the Applicant we outlined our cropping, livestock and farming calendar. This has proved a waste of time, as surveys have clashed with critical farming timetables. Surely the Applicant plans survey work far enough ahead to give us adequate notice if there is a need to carry out work at awkward times, then we can plan accordingly? Surveys have caused major disruptions to our farming business resulting in thousands of pounds of crop losses because the Applicant could not wait until after harvest. Often we have been threatened with a Section 172 notice, when we are in discussion over access or survey infrastructure. These discussions are paramount because our property was damaged during previous surveys. We are therefore trying to make sure that these scenarios do not happen again. I am sure that the Applicant would do the same if they were in our place.

A number of the pre and post condition surveys provided have not been fit for purpose, being taken into the sun with shadows, or missing areas of the survey so rendering them inadequate. We have resorted to taking our own recordings of surveys in case we need to refer to them in any survey disputes. Nevertheless, some surveys reports have been very thorough.

18.2.45

40.5.10 and 40.5.11 1. The EIA computer model can be broadly correct over tens of Km², but there could still be a few fissures of a few mm wide present. The evidence for fissure flow are :-

a. Borehole B is supplied by water from two fissures. It is likely that Borehole A is supplied mainly via water flowing out of fissures. These boreholes are south of the proposed tunnel.

b. Blick Mead spring is supplied by water from a spring which flows at approximately 0.5m/s.

c. Fishermen in the River Avon saw chalk sediment enter the water at Blick Mead while boreholes were being drilled on the landscape. This was brought up at the Issue Specific Hearing 11th June in relation to Groundwater. This shows there are inter connected fissures which enables groundwater to flow southwards from the location of the proposed tunnel.

2. The Applicant has not inspected boreholes A and B and determined the nature of groundwater flow into them. This will require:-

a. Tracer tests to determine absence/presence of fissures between site and Boreholes A and B and if so the travel time.

b. Seasonal variations in water level, rest and pump water levels, any form of pumping tests to assess yield and drawdown, undertaken geophysical logging such as conductivity, temperature calliper, flow velocity (pumped and un-pumped) to determine elevation of major flow horizons.

3. The Applicant has denied that fractures in the Chalk are connected. Water flowing from Blick Mead Spring has increased after the heavy rainfall on the 10-11th June 2019 is flowing at 0.5m/s. This demonstrates the rapid downward percolation of rain to the water table and flow via fissures. At 0.5m/s, the groundwater is capable of travelling kilometres per day. It is possible to calculate the permeability from joints, based upon their aperture width and separation (Hoek and Bray Rock Slope Engineering p131)

a. Coefficient of permeability $K = \frac{b^3 g}{12 d v}$

b. where b = width of fissure, g = acceleration due to gravity = 9.81 m/s^2 , d = spacing of joints, v = kinematic velocity of water at 20 Centigrade = $1.01 \times 10^{-6} \text{ m/s}$.

c. For a 5mm wide crack, $K = 1.2 \times 10^{-1} \text{ m/s}$ and for a 3mm wide crack = $2.2 \times 10^{-2} \text{ m/s}$ which represents permeability of 9000 and 565 times that for a 50m at 1m per day travel time.

4. The Computer model uses a grid of 250m. A 5mm fissure is $0.005/250 = 1/50,000$. Modelling is accurate to at most 10%. If we divide the block into 50,000 slices with 49,999 having a permeability of 1 we can calculate what the 1/50000th has to equal to increase average by 10%.

$$(49,999 \times 1 + x) / 50,000 = 1.1 \quad 49,999 + x = 55,000$$

$$x = 55,000 - 49,999 = 5001.$$

Therefore a fissure 0.005m thick could have a coefficient of permeability 5001 times the other 49,999 slices and it would only increase the value of the 250m block by 10% which is within HE margin of error. Therefore the model may be correct and still ignore fissure flow.

5. As Hoek and Bray (3rd Ed 1981) state p131 the permeability of the rock is very sensitive to the opening of the discontinuities) which change with stress. Therefore permeability of rock will be sensitive to stress. Consequently the Applicant cannot state that the Stonehenge Tunnel is similar to those in London unless they state the stress, which is the overburden pressure, the width and frequency of fissures/apertures, groundwater gradient, flow rate and flow velocities.

6. The pumping tests undertaken by WJ Engineering and Structural Soils were undertaken in boreholes which were not acidized. WJ used a cable percussion rig and Structural Soils used a tricone rotary bit –open hole. Drilling smears the Chalk, producing a mud cake lines the walls of the borehole which infills the fissures. Eductors can remove some of the mud cake but to be reliable acidisation should be undertaken, as recommended by the late Dr Richard Monkhouse of the British Geological Survey. Rotary open hole methods produces a far thicker mud cake than cable percussion methods as the drilling flush is blown against the walls of the borehole and into the fissures see Figure 1. Figure 2 figure 6.16 from S A P test 2018 Inter' Report) below shows that the boreholes drilled by SRK produced lower Transmissivities than WJ Engineering when comparing summer results. Therefore there may be fissures present whose entrance in the borehole wall have been completely or partially closed by mudcake.

[GRAPHS PROVIDED IN RESPONSE]

7. Stage 4 Implications of 2018 Ground Investigations to The Groundwater Risk Assessment Working Draft HE551506 April 2019

d. 2.3. 1 says fractures not persistent between boreholes which is East West direction, not North South.

e. 3.2.6 Fracture zone is not persistent in an east west band.

The report ignores the presence of dry valleys running north south and the presence of faults which run North South. The fact that springs are supplied by groundwater flowing from the north to the south shows the Applicant have ignored the presence of North South trending interconnected water bearing fissures. Grout from the TBM could easily flow southwards and either block water bearing fissures and/or cause contamination of groundwater entering Boreholes A and B. The report is concerned with assessing the presence of interconnected fissures running East West along the rout of the proposed tunnel, not those running North South. For all the above reasons we do not agree that the Scheme has been fully assessed in relation to our private borehole supply

The Applicants response

1. (a) The nature of the Chalk is discussed in detail in [AS-017] Implications of 2018 Ground Investigations to the Groundwater Risk Assessment. The Chalk is dominated by fracture flow (secondary permeability) and is heterogeneous with a wide range of hydraulic conductivity and transmissivity. There is no evidence of extensively connected fissures and fractures or karstic flow which would allow direct flow from the Scheme to water supply boreholes. (b) We have not seen evidence of the flow measurement referred to (note velocity units of m/s have been used). The spring at Blick Mead is dry for most of the year. (c) This was not substantiated or evidenced at the ISH.

2. A detailed assessment of the operation of the boreholes is not necessary because the effects of the scheme will not be significant. See Deadline 3 Submission – 8.18 – Comments on Written Representations, Paragraph 40.5.13 [REP3-013] which states that Annex E of APP-282, Table E-3 assesses the effect on quality and quantity of the groundwater at licensed private drinking water abstractions including the two Hosier boreholes (table ref R7). The sensitivity of the borehole receptors is considered to be high which is in acknowledgement of the reliance on and quality of the abstracted water. No impact is anticipated. The predicted increase in groundwater level up hydraulic gradient and decrease in level down hydraulic gradient is not predicted to have a measurable impact

on the operation of the abstraction even during drought periods. The effects of the tunnel as predicted in Annex 1 of the Groundwater Risk Assessment [APP-282] do not extend to these boreholes (Figure 4.6). With the use of the Outline Environmental Management Plan (OEMP) [REP4-020], there will be no measurable impact on the water quality at the two private water supply boreholes (Table E-3).

3 Fracture flow is not denied. There will be various interconnections across the rock mass. The flow through these as a whole is measured by the aquifer properties derived during the pumping tests which have been carried out.

4. It is not realistic to scale up flow at the scale of a fissure to regional flow dimensions. There is no evidence of interconnectivity across extensive areas. Each model cell is represented with aquifer properties appropriate to local data and the hydrogeological domain, such as interfluvial, dry valley, river valley. Groundwater flow through this cell is accurate according to the representative aquifer properties used and the groundwater level and river flow calibration achieved. The ES shows the calibration is good and has been accepted by experienced groundwater modellers from the Environment Agency and Wiltshire Council's groundwater modelling consultants peer review.

5. Each model cell is represented with aquifer properties appropriate to local data and the hydrogeological domain, such as interfluvial, dry valley, river valley. Groundwater flow through this cell is accurate according to the representative aquifer properties used and the groundwater level and river flow calibration achieved. The ES shows the calibration is good and has been accepted by experienced groundwater modellers from the Environment Agency and Wiltshire Council's groundwater modelling consultants.

6. Acidisation is an accepted technique for improving flow at a water supply well. It will not however alter the aquifer parameters which are derived from the pumping test. In the Chalk aquifer it is not unexpected that pumping test results at different times and places give different results. This demonstrates the variability of the aquifer and the absence of a uniform network of interconnected fractures.

7. The model accounts for north south higher permeability in Stonehenge Bottom valley with an additional higher permeability zone as recorded in the pumping tests. Therefore, north south trending features have not been ignored but explicitly incorporated. The dominant flow direction is north to south.

The tunnel is perpendicular to groundwater flow so the east west extent of the postulated preferential flow horizon was important to review with additional ground investigation data, in terms of the potential impediment to flow and whether the assessment was conservative. The findings were that the risk assessment was conservative. The effects of the Scheme in relation to the boreholes which are a distance of several kilometres from the Scheme have been fully assessed. See also the response to item 18.2.45, point 2

M & R Hosier response to 8.36

The Applicant has not carried out tracer tests to assess the possibility of fissure connections to our private water supply.

The Applicant has not produced a 3D model for the Scheme to show the structural geology and locate fissures and fractures. This would either back up or disprove the water model accuracy and

its interpretations and provide more information to tendering contractors. 3D models such as Golders Fracman are recognised by mining companies to highlight potential problems so they can be solved ahead of the construction, thus saving time and money.

If the Scheme is to proceed, the Applicant has a duty of care to ensure that there is an alternative water supply in place for our farm prior to construction. This will remove the risk of the Scheme to our farming business.

We have just 24 hours' worth of water supply if we experience any problems.

18.2.46

40.5.12 The Applicant has not sampled water according to the Private Water Supplies Act of 2016 and specifically for pathogenic bacteria. M and R Hosier have to supply potable water. There is no way of measuring pathogenic bacteria in real time. A sample has to be taken and the minimum time for results is 5 days. The Applicant has completely ignored groundwater flowing southwards along fissures. Blick Mead Spring shows groundwater flowing at 0.5m/s or even 0.1m/s which over 50 days means contamination could flow from the site of the proposed tunnel to Boreholes A (no water treatment) and B (Ultra only).

The Applicants response

See response to item 9.6.1 and 9.6.4 in the Comments received to Deadline 3 [REP4-036]. HE confirms that its groundwater samples have been compared to the UK Drinking Water Standards (see paragraph 3.10.2 of APP-282 and Table 3.6). HE is not proposing to take on the role of the Local Authority or the Drinking Water Inspectorate (DWI) with regard to Private Water Supplies. The Drinking Water Inspectorate (DWI) is the competent authority for ensuring the Drinking Water Directive requirements are met in England & Wales. It provides independent reassurance that public water supplies in England & Wales are safe and drinking water quality is acceptable to consumers.

For the response to fissure flow see response to item 18.2.45.

M & R Hosier response to 8.36

Comments received to Deadline 3 [REP-036] reference items 9.6.1 and 9.6.4 notes MW-WAT11

We agree that the Applicant has **compared** the samples taken from **groundwater monitoring boreholes** of the Scheme with the limits of Drinking Water Standards for hazardous substances guidelines. However, their samples were not taken to DWI standards so had differing sampling and storage methods. Therefore, it is unreliable to compare results to those of DWI. DWI requires samples to be delivered to the approved sampling lab within four hours of collection as the chemical components of the sample will begin to change after this time period. DWS tests for a suite of other chemicals as well as pathogens. The Applicant's sampling is sent to the lab and tested the following day.

We have never suggested that sampling carried out by the Applicant should replace DWI analysis. This would not be legally acceptable.

The Applicant has not taken quality samples of our private borehole water either under the Scheme sampling or DWS sampling criteria.

18.2.47

6.3 Appendix 2.2 OEMP May 2019

MWWAT11 ES chapter 11 section 11.7 Management of impact on abstraction boreholes and MW-COM6 Statement of Common Ground Private Water Supplies

The Applicant has failed to design alternative temporary or permanent supply of water for M and R Hosier should it be needed.

The Applicant has not Assessed how M and R hosier will be supplied with water if they lose their supply. If M and R Hosier pose their borehole supply they will need to order in water via lorry. The water tanker cannot reach the farm reservoir. The closest point will require the construction of a holding tank into which the lorry can discharge the water and then a pump to move it to the farm reservoir, a distance of 1000m and 30m head. To maintain a water supply will require a 30,000L lorry weighing 40T. It is not known whether the farm track can take a 40T lorry every day for months at a time, especially during winter. To obtain an emergency supply of potable water from Waterdirect (quote No 19-05384.2) for weekday is £1722 and for weekends is £2040 (quote 19- 05384.4). To construct a holding tank, install a pump, electrical supply (perhaps 3 phase), 1000m of pipe and perhaps strengthen the road will cost £1000s and take weeks. To obtain the services of a good water well driller will take 18 weeks and to complete a new water supply borehole will take 26 weeks. Total costs will be in the order of £278,000. The farm reservoir holds 1 days' supply and after that livestock, especially in summer will suffer heat stress and even death. Waterdirect have not inspected the site and so it may not be accessible by a 40 T lorry. HE need to assess that road so it can take Lorries throughout the year.

The Applicants response

See response to agenda item 5.1 in the oral submission report from ISH4 [REP4-032].

Highways England, as the Scheme promoter, is responsible for ensuring that groundwater resources, including the supply and quality of groundwater, are protected during the construction and operation of the Scheme. Potential impacts on water supplies will be mitigated through the implementation of measures included within the Outline Environmental Management Plan (OEMP) [REP4-020] (at references PW-WAT1 and WAT2, and MW-WAT1, WAT2, WAT3, WAT4, WAT5, WAT6, WAT7, WAT9, WAT10, WAT14, and WAT15), which is secured through paragraph 4 of Schedule 2 to the draft Development Consent Order [REP4-018].

As set out in the Environmental Statement, Chapter 11, Road Drainage and the Water Environment [APP-049], section 11.9, the assessment shows no significant changes to hydrology, private water supply, surface water quality or groundwater quality (water supply) during either the construction or operational phases of the Scheme. Highways England has been working with and will continue to work with Wessex Water and other statutory utility providers as required to ensure that water supplies are protected during the construction and operation of the Scheme.

M & R Hosier response 8.36

As previously stated, the Applicant is passing most of the Scheme responsibilities onto the main works contractor. Yet it is the Applicant and not the main works contractor that has determined the necessary survey works and has then been responsible for interpreting the results. As such, there will be potential areas not assessed by the Applicant that will need to be addressed by the main works contractor.

MW-WAT1 Notes the main works contractor responsible for all water and pollution elements of the Scheme construction.

MW-WAT2 Notes the main works contractor is responsible for compiling a Water Management Plan

MW-WAT3 Site drainage. This includes references to dewatering discharge. We would like to see a reference to the prior assessment of the sites proposed for surface dewatering discharge. The suitability for water discharge areas needs to be assessed in relation to land management history to prevent pathogens being washed in to the groundwater.

We are pleased to note that all samples of discharge will be analysed by the Environment Agency prior water discharge taking place, as well as measures for flood risk and effluent being taken into account.

MW-WAT4 Spill response. The main works contractor is responsible for preparing an Emergency Preparedness and Recourse Plan as well as Pollution Incident Control Plan. What responsibilities are the Applicant taking? Will liabilities be shared between the Applicant and main works contractor? If the Applicant has not brought all the potential issues to the main works contractor's attention prior to them accepting the contract this is failing under NEC3 and 4.

MW-WAT5 Pollution incident monitoring There is no mention that any "actual significant pollution incidents" will be reported to private water abstractors so they can monitor their water supplies and seek to take remedial action.

MW-WAT6 Protection of watercourses. We are pleased that these are being taken into account.

MW-WAT7 Control of pollution to water bodies. We are pleased to note that concrete batching plants are being considered, both for water for supplies and the water discharged.

We are pleased to note "*The main works contractor shall ensure that the handling of contaminated excavated material treatment processes required and the storage of excavated material does not affect the Chalk aquifer. Measures will be put into place to prevent contaminated runoff reaching open ground.*"

MW-WAT9 Ground treatment. Grouting to be agreed with Environment Agency. However, there is no noting that the main works contractor has to carry out surveys to assess the distance that the grout will travel along the rock fissures. We are told the pressures used for grouting will be monitored by the TBM head. We believe there is a need for surveys to establish the distance of grout travel in relation to various pressures and fissure width. Grout may block fissures so groundwater monitoring is not possible in some areas.

MW-WAT10 Groundwater Management Plan. See our response The Examining Authorities Second Written Questions at Deadline 6, question Ag.2.10

In addition section d) *“Development of baseline groundwater conditions and derivation of trigger levels and action levels/mitigation/action plans for exceedances and accidents/incidents.”* This statement puts a massive responsibility onto the main works contractor, who will be undertaking these tasks using the Applicant’s reports.

The Applicant has not carried out any baseline monitoring of our private boreholes, or of some of those already installed in the landscape, so how can the contractor agree to these clauses?

MW-WAT14 Relates to Surface water drainage.

WM-WAT15 Monitoring of Water Resources. See our response The Examining Authorities Second Written Questions at Deadline 6, question Ag.2.10.

In addition to this the item notes *“ The main works contractor shall, where changes in groundwater levels are predicted to occur as a result of construction activity, which would be considered significant using the methodology defined in the groundwater management plan, undertake additional site investigations.”* Statements such as this would set alarm bells ringing if I was a potential tendering contractor. This just underlines the complexity of the geology within this landscape and the reluctance of the Applicant to carry out tracer tests and 3 D modelling. The Applicant should not be relying on the contractors to carry out additional survey works, they should have done sufficient surveys up front to be aware of all potential problems.

The following references are also in respect of mitigation for water supplies although they have been omitted from the Applicants list.

MW-WAT8 Dewatering and abstraction. *“the main works contractor shall adopt construction techniques which minimise, so far as reasonably practicable, the need for and extent of dewatering and groundwater abstraction.”*

What will happen if the Scheme shows a need for dewatering and the Environment Agency do not agree to this due to the level of dewatering being significantly more than has been identified within the groundwater risk assessment? Would dewatering just go ahead under these situations, with all private water abstractors being provided with alternative supplies?

MW-WAT11 Management of impact on abstraction boreholes. Please see our response to The Examining Authorities Second Written Questions Deadline 6, question Ag.2.10.

In addition, under point a) how will the contractor establish where any intermediate monitoring boreholes should be placed if the Applicant has not carried out any 3D models of the Scheme to note the fissure and fracture locations?

MW-WAT12. Flood Risk Management Plan.

MW-WAT13. Flood Risk – general provisions. We note with concern *“At the end of construction...pile walls where required will be removed, cut down or piped through routes provided to prevent the potential build-up of groundwater.”*

Do statements like this not ring alarm bells in potential tendering contractors? This just highlights the complexity of the geology within this landscape and the reluctance of the Applicant to carry out tracer tests and 3 D modelling shows a lack of responsibility.

The Applicant's response also states that they have been working with Wessex Water to ensure water supplies are protected during construction and operation of the Scheme. Surely the Applicant means working with the Environment Agency as this is the authority responsible for the groundwater protection?

We stand by our comments, that the Applicant has not fully assessed the complex structural geology and hydrogeology in relation to this Scheme.

They are relying on water modelling which we maintain has too great a margin of error to pick up any potential problems. No tracer tests or 3 D modelling have been carried out to show up fissures and fractures. This, in combination with the Applicant's omission to commit to installing alternative water supplies to those who are groundwater reliant, gives us no confidence that the risks to our businesses have been fully considered.

18.2.48

40.5.16 Wessex Water will be assessing the water impacts of the Scheme on public water supplies. They would hold scant information on our private borehole supplies, therefore would not be in a position to comment on them accurately.

The Applicants response

The ongoing monitoring of private boreholes is taking place across the Scheme which will inform any works that Wessex Water need to complete additional water supply works.

Any associated works regarding private water supplies are also secured through the OEMP, MW-COM6 [REP3-006].

M & R Hosier response to 8.36

Our private boreholes have yet to have monitoring equipment installed. During May the Applicant assessed our boreholes for work required to accommodate water monitoring apparatus. Preliminary works have not been carried out, so there can be no monitoring until after this time.

From recent survey requests by the Applicant, we are aware that Wessex Water has been approached for rerouting mains water supplies in relation to the realignment of Rolleston Crossroads. However, this exercise is not for providing water to our farm. Wessex Water would need to know our water supply and pressure requirements prior to making any preliminary assessments for a mains connection.

OEMP [REP-006] MW-COM6 requires rewording and additions for it to provide security for our farm water supply. See our response to the Examining Authorities Second Written Questions at Deadline 6 question Ag.2.10.

18.2.49

40.5.17 MWWAT3 ES Chapter Section 11.Section and MW AIR 1 ES Chapter 5, Section 5.8

How will the silt sized particles be prevented from being blown off the spoil heaps. Silt is the particle size most susceptible to erosion by wind or water. Loess is a soil comprising wind-blown silt. The silt containing phosphate would be blown into the Rivers Till and Avon causing algal blooms. Silt containing phosphate could be washed into the groundwater and rivers causing growth of algae and/or bacteria. A major aspect of good soil management promoted by the Government is to prevent nutrients, especially phosphate carried by soil particles, from entering water courses to prevent eutrophication.

The Applicants response

Good soil management as promoted by the Government is fully accounted for in the approach, management and controls proposed within the OEMP [REP4-020]. As outlined within Items PW-AIR1 and MW-AIR1 of the OEMP, contractors shall manage dust, air pollution and exhaust emission during the construction works in accordance with Best Practicable Means. This includes management measures in relation to stockpiles which include stockpiles being covered, seeded or fenced to prevent wind whipping. It is therefore considered that the risk of silt blowing or washing into the rivers Till and Avon causing algal blooms is minimal.

M & R Hosier response to 8.36

We do not know how fencing will prevent wind whipping of stockpiles. Will all stockpiles be covered to prevent silt being blown, or will it only be the stockpiles in location of public locations? There are references to bunds being seeded around the works compound, but will seeding be carried out in other areas as well?

18.2.50

40.5.18 Monitoring has yet to take place, so potentially there will only be 18 months' worth of data prior to the construction work taking place. We suggest that this level of monitoring is inadequate to supply base line data considering all other Scheme monitoring boreholes have taken place since 2017.

The Applicants response

It is not unusual to have a relatively short record of groundwater level data local to a scheme and extend this with longer records from boreholes across the catchment. Longer records are available across the catchment including south of the Hosier's at the EA's OBH Stoford Cross, and north of the proposed scheme at Wiltshire Grain Silo, and west and east of the scheme at Berwick Down and Amesbury respectively.

Additional monitoring was reviewed against the model simulation in AS-019 which shows the model simulates groundwater levels in the areas of new groundwater level data well.

M & R Hosier response to 8.36

Our concerns remain with our private borehole supply, so whilst the other boreholes are being monitored in the wider area, it is the direct supply into our boreholes that is critical to us. Even though the results of the monitoring have been assessed and found to be in line with the ground water model, this is not specific to our borehole supplies. Fissure flow could be hampered in the location of our borehole, yet this might not be detected on the monitoring boreholes.

Monitoring of our private boreholes that supply cottages and our farm business has yet to take place so there will be limited baseline data on our farm borehole supply.

As previously stated, we have concerns with the groundwater model, which uses data over the large Wessex Basin area rather than that which is specific to the small corridor the Scheme occupies.

18.2.51

40.6.5 The sectional diagram was only provided on 24th May with deadline 2 being 3rd May and deadline 3 being 31st May. The area that I was referring to is not in the location of the western approach to the tunnel as per G- G1, noted on page 5, but on page 6 in the vicinity of the western portal. The area of ground in the location of the western portal follows the dry valley. The A303 was built up in this location in the 1970's as the blind dip in the road was an accident black spot. The current A303 is at a much higher level in the area of the western portal approach than the ground level on the southern side being considerably different height to the A303 on the northern side. There is no sectional diagram noted in the vicinity of the western portal.

From previous discussions with the Applicant we have been told that the area of land between the current A303 and the deep cutting will not be landscaped and the topography will remain as it is. We are told this is a cultural heritage decision to minimise damage within the WHS. Perhaps this has subsequently been changed as there is reference to the slopes on the upper part of the retained cutting being graded back.

The Applicants response

The western portal is proposed to replicate existing ground levels as far as practicable, subject to the limits of deviation as indicated on the environmental masterplan [APP-059] and any new landscaping is to reflect and integrate with the original landscape as set out in P-LE02 of the Outline Environmental Management Plan [REP4-020]. There would be graded slopes from the top of the retained cutting structure and the existing landform, as indicated on the General Arrangement Drawings (Sheet 7 of 15) [APP-012].

M & R Hosier response to 8.36

The current A303 is at a much higher level than the existing ground form in the location of the western portal. However, we understand from the Applicant's response, that this current topography will remain, but the slopes from the top of the retained cutting will be graded.

18.2.52

40.6.6 We believe that there would be views of the retained cutting and the traffic on the road below. There are no sectional drawings in the location of the western portal and the section just after the western portal to confirm otherwise. Cultural Heritage Setting Assessment [APP-218] page 157 figure 8 viewpoint CH07 shows a photomontage of proposed view west, looking into green bridge 4. This photo has been taken from our landholding beyond the redline boundary for the Scheme and it clearly shows the retaining walls of the cutting and the entrance of green bridge 4.

The Applicants response

The Applicant has outlined that there would be close-range views of the retained cutting in their response at Deadline 3 [REP3-013] due to this being an area of open cutting. The Applicant has also referred to the cultural heritage viewpoints (including CH07) within this response which demonstrate proposed views.

M & R Hosier response to 8.36

The Applicant agrees that there will be views of the entrance of green bridge 4 and the open cutting at close range, but the view provided within CH010 is from some distance away, rather than at close range. Therefore, the green bridge will be seen within the cultural heritage landscape as a modern feature at both close and distant vantage points.

18.2.53

40.6.7 Figure 7 image CH06 provides a viewpoint of the green bridge 4 that will not be available to the general public. It is taken from the only visible barrow (longbarrow) in the privately owned Diamond Group. This intervisibility of the monuments will not be available to general public. A more appropriate viewpoint for a 360 photo would be from the location of green bridge 4.

Figure 8, CH07 is a 360' image taken from outside the redline boundary of the Scheme. The entrance of the green bridge 4 is clearly shown as well as the retaining walls of the cutting. Lighting is proposed under green bridge 4 so this will also be seen in the surrounding landscape.

Figure 11, image CH10. We struggle to understand this photograph. From Figure 1, Cultural viewpoints, page 150, the arrow marker shows that the photograph has been taken looking down along the A303. Yet the visual produced shows the traffic running from left to right, ie the photograph has been taken looking side onto the A303. Had the photograph been taken in the direction indicated we would be looking at the back of the tunnel and not into the mouth of the portal. One could be forgiven for thinking that the photograph has been taken from location CH09, but looking side onto the A303. As such, there is no representative viewpoint for CH10.

The Applicants response

A viewpoint from Green Bridge No. 4 is being undertaken in response to Written Question (LV.1.9). Requirement D-CH10 of the Outline Environmental Management Plan [APP-REP4-020] requires lighting under Green Bridge No. 4 to only occur between dawn and dusk, be dimmer controlled, and

designed to minimise light spill outside of the bridge footprint such that it will not be visible in the surrounding landscape as per the suggestion in the questions.

Image CH10 is located to the south of the existing A303 looking west. Figure 1 does not locate the arrow along the existing A303 but along the alignment of the proposed tunnel, so that the existing traffic is to the right of the location of the view, as per CH10. There is therefore a representative viewpoint for CH10.

M & R Hosier response 8.36

We look forward to seeing the viewpoints east and west from the green bridge 4 in due course.

We have concerns that although there is the intention within the DCO to have dimmer controlled lighting with minimum light spill outside of the bridge footprint, there is the potential for changes later, should it be proved there is a safety risk. Therefore, although the intention is set within the DCO it is not necessarily a long-term certainty.

18.2.54

40.6.8 There has been no provision of views from green bridge 4.

Standing on the bridge the view to the east will be onto the surface of the carriageway emerging from the western portal. The view from the west will be onto the carriageway as it approaches the longbarrow junctions.

There will be no improvement in the tranquillity within the area of green bridge 4. Green bridge 4 does not provide visual or physical connectivity within the area. We remain of the opinion that the scheme as presented does not benefit the OUV of the WHS. The road and portals would have to be completely removed from the WHS for this to be correct.

The Applicants response

Views from the western and eastern edges of Green Bridge No. 4 are being produced in response to Written Question (LV.1.9). Views from Green Bridge No. 4 were not included in the visual assessment [APP-045] because they are not an existing view from publicly accessible land, which forms the premise of the identification of views. The locations of the views for the visual assessment was agreed with the National Trust and Wiltshire Council as set out in paragraph 7.3.18 seq of APP-045. Green Bridge No. 4 will provide physical connectivity as it will cross the retained cutting and provide a restricted byway. Please refer to the Applicant's response to item 18.2.37 above for a response regarding the visual and physical connectivity between monuments provided by the green bridge. The proposed Scheme is considered to improve the tranquillity across the WHS by both the use of a tunnel and the retained cutting. This will include from Green Bridge No. 4 as the road and vehicles will be in cutting, rather than at surface level, as per the existing A303 and with reference to D-NOI15 within the Outline Environmental Management Plan [REP4-021] the surface finish of the retaining walls at the approaches to the tunnel portals shall be designed to reduce the reflection of noise.

The proposed Scheme is considered to result in beneficial effects to the OUV of the WHS as set out in the Heritage Impact Assessment [APP-195].

M & R Hosier response to 8.36

We note that the location of the views for visual assessment in respect of green bridge 4 was agreed with National Trust and Wiltshire Council. However, the area of green bridge 4 is not within the ownership of NT or Wiltshire Council. As such, they would not be in a position to comment unless they had requested to view the area on site. The Cultural Heritage Settings Assessment [APP-218] paragraph 2.6.1 states *“All heritage assets, or Asset Groups, were visited where access could be obtained from the landowner...This enabled all assets to be adequately observed within their current environment, their place within the landscape to be understood including physical and visual interconnections with other assets and topographical features, and the impacts of the Scheme to be assessed.”* During archaeological and geotechnical investigations, the Applicant has had the opportunity to assess the views from green bridge 4 in situ in respect of intervisibility of the monuments.

We maintain that the Scheme does not result in a beneficial effect to the OUV of the WHS as there are still four lanes of carriageway and portals within the WHS.

18.2.55

40.7.8 Although responsible for the management and enforcement matters relating to byways 11 and 12 Wiltshire Council are failing their responsibilities. Fly-tipping remains on site for months despite reporting. Damage to scheduled monuments is not addressed despite having brought this to the attention of Wiltshire Council and Historic England. Illegal campers are permitted to reside on the byways for 6 months plus without being moved on even after continually bringing this to their attention. I fail to see how this situation will change after the new road Scheme is in place, indeed there is every possibility that the problems will increase as there will be additional miles of byways for Wiltshire Council to enforce and manage.

As demonstrated at the ETRO on the byways 11 and 12 from summer solstice 2018 to winter solstice 2018, the trails bikes were still able to use the byways via the side gates so no doubt they will continue to do this as enforcement will be minimal.

It is highly likely that the poaching fraternity will adapt their means of transport to enable them to use the equestrian gates or traverse the Kent Carriage Gates.

The Applicants response

The management and enforcement of access across the WHS including byways 11 and 12 is a matter for Wiltshire Council (as the highways authority with responsibility for the public rights of way).

WC have the necessary legal powers to control potential problem issues raised, including parking, anti-social behaviour and fly-tipping. Fences along public rights of way would be provided to prevent access onto private land as required (pursuant to MW-COM8 and P-PRoW2 of the OEMP. Public access to bridleways would be controlled by equestrian gates which are too narrow for most vehicles to use. Public access to restricted byways would be controlled by Kent carriage gaps which are designed to prevent entry by vehicles.

M & R Hosier response to 8.36

We stand by all our comments above.

Although Wiltshire Council has the necessary legal powers to control the antisocial behaviours on the byway, it seems unable to do so. This is already having a negative impact on the WHS with visitors reluctant to use some stretches of the byways. It seems that organisations are only interested in what they can take from the WHS, but are unwilling to maintain it.

As previously stated and already known by the Applicant, fencing does not prevent access to private land, especially when the Applicant has already promoted the southern part of the WHS for roaming and exploring.

18.2.56

40.7.18 In order to better understand the addition of the bridleway along the A360 I walked the area to see how it compared with the views of byway 12 and 11. I was disappointed by the views along the section between the byway 12 and the current A360 roundabout. The barrow groups are not prominent along the walk, being obscured by woodland and topography. The views from byway 11 and 12 will still provide the best aspects in the southern part of the WHS.

The Applicants response

Highways England wishes to ensure that the Scheme is integrated within the existing Public Rights of Way network and, where the opportunity exists, create legacy benefits for non-motorised users in accordance with its Strategic Business Plan and Roads Investment Strategy, which are aligned with Government policy to encourage walking, cycling and horse-riding through national and local policies and plans. The proposed bridleway along the A360 is therefore provided to facilitate a connection between the proposed and the existing public rights of way network linking the existing byway open to all traffic WFOR16 (part of "Byway 12") in the south and the proposed restricted byway along the A360 north of the existing restricted byway BSJA9

M & R Hosier response to 8.36

We are of the opinion that the byways will facilitate antisocial practices within the area which are not in line with the Government's policy. This is already demonstrated by the practices on the current byways within the area.

18.2.57

40.7.20 We do not agree that it is our responsibility to enforce the access onto our private land. The proposed byway puts a new pressure on our farming business and woodland as it is not of our making it would be HE responsibility to ensure that adequate measures are in place to prevent trespass.

The Applicants response

The new byways are all along existing highway with existing access rights for the public. Strained Wire Fences with barbed wire strands as necessary would be provided along public rights of way to separate the public from adjacent private land (P-PRoW2 of the OEMP).

M & R Hosier response to 8.36

“Stranded wire fences with barbed wire strands as necessary” would not be adequate along PRoW. This will not prevent access by people and will certainly not keep dogs out. With the Scheme promoting biodiversity, the Applicant has a duty to ensure that the wildlife that it seeks to encourage into the area has some protection from dogs. This is especially important as most dog walkers have their pets “off lead”.

18.2.58

40.7.21 Our experience with trespass into our farm highlights that fencing is no deterrent. General public ignore signs to private property and habitually enter woods situated in close proximity of byways for firewood, desecrating them in their wake.

Fences are also cut by poachers so livestock unwittingly escape from fields. Bringing new byways into locations of the farm in proximity to livestock and woods will spread these pressures onto new areas of our farming business.

The Applicants response

Improving non-motorised access to the World Heritage Site is a key objective of the scheme. The restricted byway along the route of the existing A303 and A360 will be designed to exclude mechanically propelled vehicles through the use of Kent carriage gaps. Locked gates will provide vehicle access to authorised users only. Removing vehicular access rights from A303 will make byways 11 and 12 less accessible to mechanically propelled vehicles. The new restricted byways are all along existing the highway with existing access rights for the public so there will be no increase in the access available.

M & R Hosier response to 8.36

As demonstrated at the ETRO on byways 11 and 12 from summer solstice 2018 to winter solstice 2018, the trial bikes were still able to use the byways via the Kent Carriage gates. No doubt this practice will continue with no enforcement from Wiltshire Council. For the Scheme objectives to be achieved there needs to be an agreement on WC’s behalf to enforce their authority on the PRoWs.